BENEFITS OF A COMPETENCY-BASED TRAINING PROGRAM

BY: William J. Shaw, Chief
Willoughby Hills Fire Department
Willoughby Hills, Ohio

An applied research project submitted to the National Fire Academy
as part of the Executive Fire Officer Program

November 1998

ABSTRACT

This research project identified advantages of a formalized training program and developed a competency-based program that was utilized to initiate and train newly hired personnel of the Willoughby Hills Fire Department. This was done after it became evident that the Department did not have a well structured, reliable indoctrination or training program for newly hired personnel, either career or part-paid.

Historical, action, and descriptive research were used to (1) Identify the current usage of competencies in fire department training programs, (2) Identify advantages of utilizing a competency-based training program for newly hired personnel, (3) Define what task skills and local specifics should be included in the training program, and (4) Determine if a competency-based training program can be used in areas other than training.

The principle procedure used to gather information was to review existing literature from both the fire service and the private sector concerning the topic of competency-based training. Additionally, a survey on the current usage and benefits of competencies in fire department training programs was conducted at Fire-Rescue International September 12 – 15, 1998 in Louisville, Kentucky.

The results of the research identified the popularity of competencies, the numerous advantages of using competencies for the department as well as the students and instructors, and other areas that competencies can be useful.

The recommendation is for the Willoughby Hills Fire Department to immediately institute a competency-based training program for newly hired employees and also to extend this type of program to the department's training program.

TABLE OF CONTENTS

INTRODUCTION

The Willoughby Hills Fire Department realized since the 1960s that newly hired personnel must be trained prior to actually working on duty. Over the years, the system that was used fell into disrepair. It became evident that the Willoughby Hills Fire Department did not have a well structured, reliable indoctrination or training program for newly hire personnel, either career or part-paid.

The purpose of this research project was to identify the advantages of a formalized training program and develop a competency-based program that can be utilized to initiate and train newly hired personnel of the Willoughby Hills Fire Department. Historical, action, and descriptive research were used to answer the following questions:

1. What is the current usage of defined competencies in fire department training programs?
2. What are the advantages of utilizing a competency-based training program for newly hired personnel?
3. What task skills and local specifics should be included in the training program?
4. Can a competency-based training program be used in areas other than training?

BACKGROUND AND SIGNIFICANCE

The Willoughby Hills Fire Department is located approximately 15 miles east of Cleveland, Ohio along Interstate 90. The Department serves the City of Willoughby Hills, population approximately 9,000, and is supported by general fund monies as well as a fire levy. The Department also serves the Village of Waite Hill, population approximately 1,000, on a contractual basis. Transient population served is over 1 million annually who travel the 56 miles of interstate highways and enjoy 25 acres of park system within the city. The total service area is

approximately 25 square miles. The Department is a full service operation offering fire suppression, emergency medical service, fire prevention and education, fire investigation, hazardous materials response, and technical rescue services. These operations are accomplished by utilizing 3 Class A engines, 2 Paramedic ambulances, 1 Hazardous Materials vehicle, and a variety of support vehicles. The Department is a combination operation with services provided by 6 career fire fighters/paramedics, 3 career Lieutenants, 1 career Captain, and 1 career Chief. Additionally, 1 part-paid Assistant Chief and 39 part-paid fire fighters/paramedics support the career staff. The majority of the part-paid staff are career fire fighters for neighboring or surrounding fire departments.

The Department was formed as an all volunteer department in 1947. As the service area began to grow in population and complexity, so did the call volume for department members. Eventually, the department evolved to an all part-paid department.

In 1987, the structure of the fire department again changed with the hiring of the first group of career fire fighters/paramedics. Since all of the newly hired personnel had come from within the department, there was no standardized training program. This was due to the fact that the candidates had participated in the current program and had obtained the highest level of promotion possible within the part-time ranks up to that time. As time progressed, additional personnel from within the department were hired as career fire fighters/paramedics.

The training program of the Department was a multi-faceted approach and was intended to provide members with education and hands-on training in fire fighting and emergency medical skills. The first phase of the program was a tool developed by the department to train new recruits known as the Basic Training Outline. All newly hired personnel prior to being assigned station duty completed this outline. The outline consisted of basic information regarding

equipment locations on vehicles, general maintenance of equipment and vehicles, and daily shift operational procedures. This system did measure competency in a sense in that the candidate was required to show proficiency of these basic skills to a senior fire fighter or officer.

Another phase of the training program was mini-drills or shift drills. These were drills of at least 30 minutes in duration and were required to be performed on each day shift and each night shift. The shift officer or another department member who had specialized training usually taught these drills. Additionally, department drills of approximately 2 hours in duration were conducted on Monday evenings and repeated on Wednesday mornings. While there were adequate opportunities for training, the level of competency was not addressed. The department drills were intended for training but used for other purposes as well. One of the other purposes was to determine an applicant's desire and ability to perform. In order to be hired on the department, an individual would attend drills so department members could evaluate him or her. If department officers felt favorable towards the applicant, the applicant was hired. The other purpose of the training program was its use as a measurement tool of participation. The department rule that was in place was that personnel had to attend two departmental training sessions each month to retain membership on the department. The rule did not address the issue of participation or competency. A department member could attend a drill, provide little or no participation, sign a drill attendance form, and receive 2 hours credit for training.

Since that time period, the training program has experienced few changes. The Basic Training Outline is still the standard training and competency measurement tool utilized by the Department for newly hired employees and mini-drills as well as departmental drills are still required. It was not until 1996 that the Department discovered that the current training system was no longer adequate.

In December of 1996, the city hired a career fire fighter/paramedic from outside the department. This candidate had all the state required certifications for a career fire fighter and paramedic but had no fire fighting experience. After a 2-week basic training program that was intended to familiarize the firefighter with daily operations as well as introduce him to fellow workers, the fire fighter was placed on a regular shift. Once again, there were no training goals or objectives set for the new recruit. The Lieutenant and senior career fire fighter on the shift were instructed at the time to train the new fire fighter, although no set program was in place. During the one-year probationary period for this fire fighter, training did occur. However, the training was loosely documented and there was no testing or measurement of the fire fighter's progress.

It was not until this situation occurred that the department realized the seriousness of the problem. The department discovered it lacked a method to properly train new personnel who had not come from within the department. The department also did not have proper documentation of this training or evaluative tools to determine the competency of a newly hired fire fighter/paramedic.

While the department stopped using the training program as part of the hiring process many years ago, the program that is currently in place has caused a number of problems in the past that continue in the present.

A past problem, which still exists, is that the Department had no evaluative tools to determine the competency of newly hired employees. This resulted in the department hiring personnel with minimal training or incomplete training.

Upon receipt of an application, the Department would accept the submitted certifications without verification. This caused a problem in that standards of training vary from instructor to

instructor and from program to program. The department was accepting personnel with no uniformity of competency or method to measure if the candidate was competent. The author recalls being hired in 1984 with only the basic emergency medical training required by the State of Ohio and no fire fighting training, other that what was obtained within the Department. After completion of the Basic Training Outline, the author was permitted to work as an on duty fire fighter, even though he had no State of Ohio fire fighting training certification until much later.

Through the years, the department has hired many people on a part-paid basis. The result has been a variety of skill levels for personnel on the department. While this fact in itself is not unusual for fire departments across the country, the Willoughby Hills Fire Department has no tool to determine the competency level of their personnel. This has led to scheduling problems, such as having a shift of very inexperienced fire fighters, as well as some service delivery problems.

As noted previously, the process used to hire personnel has improved but the question of competency remains. This same hiring problem was repeated in 1996. Due to the inexperience of the newly hired career fire fighter, the department incurred a substantial amount of overtime cost due to the lack of training of this person.

Another problem identified by reviewing the Department's training program was that the program had loosely set standards that were open to interpretation by evaluators.
This system caused a significant problem within the Department because the program had no formal documentation of what knowledge was acceptable. This allowed for variations in interpretations of what was and was not acceptable. From the author's personal experience, most candidates, if not all knew that some fire fighters or officers were more strict than others. Consequently, some candidates would seek out evaluators who were known to be less critical or

demanding. Additionally, the program did not require the candidate to exhibit knowledge or proficiency in the skills of fire fighting or emergency medical services.

A related problem has been that the standards used by evaluators may not be those of the department. As noted above, the majority of the part-paid personnel are career fire fighters in neighboring or surrounding communities. Without a clear set of competencies or standards, these personnel had no choice but to evaluate people by the standards of their career department and not those of the Willoughby Hills Fire Department. This has led to confusion on the fireground as well as some personnel problems such as a difference of opinion between the career members and the part-paid members concerning operations.

If allowed to continue, the impact of these problem areas on the future of the department will be significant. The question of level of competency will come into play should any litigation arise in the unfortunate event that a department member gets injured or killed. If allowed to continue, the results could be debilitating to the department, as discussed in the Legal Aspects module of the Executive Development course conducted at the National Fire Academy. The current program leaves the Willoughby Hills Fire Department relatively defenseless in this area.

Additionally, there is potential that morale will continue to decline. As discussed in the Working as a Team module as well as the Service Quality/Marketing module of the Executive Development course conducted at the National Fire Academy, this will eventually cause a decline in service delivery efficiency.

LITERATURE REVIEW

The literature review for this research focused on three specific areas. First, a review of the applicable Willoughby Hills Fire Department training program and policy and procedure manual was conducted. Next, a review of fire service related publications, specifically

addressing training programs, was completed. Finally, a review of private sector publications specifically addressing training was performed.

Willoughby Hills Fire Department Policies, Procedures, and Training Program Documents

A review of the current training program and polices and procedures relating to training was conducted. The main document reviewed was the department's Basic Training Outline or BTO. The BTO is the primary training document for newly hired personnel of the department that spells out specific areas of knowledge that are required to be known. This document was originally produced by the department in the 1980s and has had few revisions since then. The main thrust of the BTO was for the newly hired fire fighter to be able to identify the operation of the vehicles as well as the location and operation of the equipment on the vehicles. The BTO was found to be outdated, listing vehicles and equipment that has been out of service for at least 2 years (Basic Training Outline, 1991)

Other department documents that were reviewed were the department's policies and procedures relating to training. The only training issues that were addressed were the number of drills that were required of members. The policies didn't address any standards for the number of hours required, participation, or competency. (Policies and Procedures, 1994)

Fire Service Publications

A review of fire service publications revealed the topic of competency in training programs has been recognized for many years. The issue was first alluded to as early as 1931 in the Federal Board of Vocational Education. The publication stated that a more systematic training program was needed in the fire service (Federal Board of Vocational Education, 1931). It also mentioned that in some departments, training consists of "acquiring knowledge of the occupation by absorption, observation, and casual pick-up methods while working with more

experienced firemen" (Federal Board, 1931). This method is commonly referred to as on the job training and can be problematic in many areas. For example, (a) personal performance standards may differ from supervisor to supervisor, (b) what material is deemed important to know may vary, and (c) personnel could be instructed how to accomplish a task incorrectly, possibly learning dangerous short cuts. All of these areas lend themselves to a dangerous fireground and confusion for the employee. Additionally, this type of training is frequently not documented. The result of using this type of program has a high probability of leading to disastrous results.

Evidently, the training problem has continued many years later. Fire personnel continue to learn their fire fighting skills primarily through a basic academy and on the job training (Curtic, 1995). Frequently, personnel are hired, given tools and skills and expected to meet the goals of the department without being given the necessary training. Therefore, departmental goals are not met because personnel are not properly trained (Larson, 1990). Unfortunately, exposure to the skills does not guarantee competency.

In the 1970s, there began a push for competencies for firefighters. It began with the Joint Council of National Fire Service Organizations, or JCNFSO, being formed. This organization eventually formed the National Board of Professional Qualifications, or NBPQ, in 1972. The first fire fighting professional standards were developed by National Fire Protection Association technical committees with the intent to create "performance standards in such a clear and concise manner that they can be used to determine, without doubt, that any person so measured does truly possess the skills" required (Estepp, 1992).

Since the inception of these standards, there have been many fire officials in agreement with the concept but they are ignorant of the pros and cons of the training, education, and testing (Witmer, 1983). A competency-based program is made of numerous elements. First, there must

be identified and defined competencies. Second, there must be instruction to teach firefighters how to master these skills. Third, there must be criterion based testing (Walker, 1989). A criterion based test is one in which responses are assessed according to specific criteria or standards (Deming, 1982).

It is not sufficient for a firefighter to only possess the knowledge; he/she must also possess the skill. The goal of competency-based training is to teach firefighters what they must be able to do as well as what they must know (Walker, 1989).

While the majority of the fire service publications held positive information regarding competency-based training programs, there were some sources that identified some negative features. Competency-based training programs will increase the amount of paperwork required by instructors and supervisors (Larson, 1990). Additionally, Larson states that more attention will be focused on instructors as the documentation process increase, thus causing some anxiety for instructors or supervisors. Further, there are some who feel that competency-based training will place more importance on test results, thus mistaking the minimum competency for a maximum skill level (Witmer, 1983)

Private Sector Publications

A review of private sector publications was also conducted. Other professions are getting away from only paper and pencil testing as well and are moving towards testing for competency. For example, Physician's testing has moved from standard testing methods to a measure of competence. (JAMA, 1995) Physicians are using similar criteria as described by Walker. The profession is moving towards a model that requires a doctor to know, know how, show how, and do. (JAMA, 1995)

It was found that in a competency-based program, advantages exist for both students as well as instructors. Many fire administrators and training officers have found the attitude towards training to be less than enthusiastic at times. However, goal setting has been found to increase student's performance motivationally through a person's intentions in regards to effort and persistence. Goal setting can increase the thinking process by directing attention to discovering strategies that will lead to goal attainment. (Winters, Latham, 1996)

For new recruits, competencies can have a positive effect on attitude as well. Understandably, these individuals are already highly motivated, however they do experience periods of disinterest in some areas. Competencies will help ensure interest in the topic because the student will be required to "show how" at some time in order to obtain a position. (Witmer, 1983)

Additionally, there are advantages for the instructor to operate in a competency-based program. Competencies can guide the instruction of students. The instructor should begin course preparation by asking what the student should learn as a result of the training (Deming, 1982). The reason for starting with this approach is fundamental because "no matter what or how much else the trainee learned, if he or she failed to learn the information or develop the skills which are the primary objects of the training, then the training has failed in its central purpose" (Deming, 1982).

Another interesting concept forwarded by Deming (1982) was overlearning. Many fire service professionals realize that knowledge and skill previously learned will deteriorate without use. To help combat this problem, fire service organizations utilize frequent refresher training sessions to reinforce knowledge and skills that may have deteriorated over time. However, there is another method available to combat this situation, which is overlearning. Overlearning is

defined as practicing a skill in a repetitive fashion, well beyond the point where competencies are met (Deming, 1982). Athletes, practicing mundane skills over and over utilize this concept, even though they have previously shown mastery of these skills. The same can be applied to fire fighters in less busy stations who may have less opportunity to use their life-saving skills, but when needed, must be automatic and exact (Deming, 1982).

In summary, comparing the review of the Department's training program with the current literature identified areas of deficiencies in the current Willoughby Hills Fire Department training program. This situation has placed the Department at risk in a variety of major areas. Additionally, the review of literature, both past and present, helped identify many benefits of a competency-based training program that will lead to improving service delivery and a reduction of liability.

PROCEDURES

The desired outcome of this research project was to create a competency-based training program to be used by newly hired personnel of the Willoughby Hills Fire Department. In order to accomplish this, historical research was utilized in the literature review to discover what advantages there are to using a competency-based training program. Most of this research was conducted at the Learning Resource Center of the National Fire Academy in Emmitsburg, Maryland. Additional literature was collected at the Mentor Public Library in Mentor, Ohio as well as the library of Lakeland Community College in Mentor, Ohio. In addition to the literature review, some information was gathered at seminars attended by the author while at the Fire-Rescue International Conference sponsored by the International Association of Fire Chiefs held in Louisville, Kentucky September 12 – 15, 1998.

Descriptive research also was used to determine the current usage of competency-based training. A survey was developed to (a) measure who is using competencies within their training program, (b) were benefits realized from using the competencies, and (c) what other uses are there for competencies. A survey was conducted during the Fire-Rescue International Conference. 54 Chief fire officers from around the United States were randomly selected to complete a survey (Appendix A). Participants were approached at random by the author before seminars and during breaks between seminars. Only Chief officers were surveyed. No consideration was given to the geographical location, size, or department structure.

The limitation found with this survey was that Volunteer Chiefs frequently understated the number of people on their department. Apparently there was some confusion regarding the question referencing the number of sworn personnel on their department. Additionally, some Chief officers stated they were too busy to participate, thus reducing the population of respondents.

Action research was also utilized for this project. The information gathered during the historical and evaluative research phases was applied to develop a new training program for newly hired employees of the Willoughby Hills Fire Department.

RESULTS

Answers to Research Questions

Question 1: What is the current usage of defined competencies in fire department training programs? As shown in Chart 1 of Appendix A, 87% of the departments surveyed overall are currently using competencies in their training program. 87.5% of the career departments surveyed currently use competencies, as does 84.2% of the combination departments surveyed. Further, 88.9% of volunteer departments surveyed use competencies.

Question 2: What are the advantages of a competency-based training program? 4 distinct advantages of competency-based training programs were identified by the research.

1. Competency-based training can be effective as a motivational tool for the student. When trainees face testing at the completion of the program, they are more likely to attend training and actively participate in the training (Smith, Merchant, 1990). Additionally, as noted in Witmer's (1983) article, this information will not only be useful to the student once in the fire service, but may also be required to know to become a part of the fire service. Survey respondents further reinforced Witmer's point, as illustrated in Chart 5 (Appendix A) that indicates around 30% of respondents utilized competencies to evaluate individuals in the initial hiring phase.
2. Competency-based training will provide for consistent instruction of the department personnel. A competency-based program holds the instructor accountable for results. Witmer (1983) states that the use of competencies in training programs naturally promotes instructor accountability. Training objectives that are clearly written will assist the instructor in analyzing what the student should learn (Deming, 1982). The use of competencies will help reduce the variations of teachings and potential for shortcuts or improper methods being taught because supervisors will be able to review student performance. If student's scores or performance is consistently low in certain areas, the instructor and/or supervisor will realize that this area may need to be revised.
3. Competency-based training can result in consistent performance. As shown in Chart 6, all types of departments using competencies indicate that competencies are a benefit to their department (Appendix A). Further, Chart 7 indicates that all types of departments using competencies indicate consistent performance as the most common benefit (Appendix A).

4. Because testing is an integral part of competency-based training programs, a substantial amount of documentation is provided. This will provide to citizens, as well as governing bodies, a better understanding of how prepared their department is to meet the requirements of the service area (Witmer, 1983).

Question 3: What are the skills that should be included in the initial training program? The National Fire Protection Agency standards clearly identify all competencies required for the various positions with the fire department (Walker, 1989). While this statement is true, the study indicated that there are other areas that need to be addressed as well. As indicated on Chart 2, all types of departments rely upon local requirements more when developing competencies, with the exception of combination departments. Combination departments rely more heavily on current NFPA standards (Appendix A). Additionally, as noted by Rukavina and Stittleburg (1998) at his presentation at Fire-Rescue International, lawyers will look first at locally accepted standards when dealing with fire department training issues in a court of law. In the absence of local standards, applicable state or national standards are reviewed. The idea of local requirements for setting competencies can be further exhibited by Chart 3 and Chart 4 (Appendix A). These charts show that most instruction for competencies occurs at the local level, as does the development of testing for competencies, regardless of type of department. The next most popular location utilized for instruction is the National Fire Academy and the next most used source to develop the testing is the International Fire Service Training Association, whose material mirrors the NFPA national standards. The only exception to this result is volunteer departments. One could infer from these results that because local standards are relied on the most, the teaching to meet the competencies and testing of competencies occurs more at the local level.

Question 4: Can competencies be used in areas other than training? Research showed that fire departments are utilizing competency-based training programs for use in areas other than training. Results of the survey, as shown in Chart 5 (Appendix A), indicates the most popular ancillary use of competencies of all departments is in the area of evaluations. The same chart also shows that the second most popular use of competencies is in the area of promotions. The use of competencies in the areas of retention and initial hiring varies between types of departments.

Additionally, the descriptive research showed that it no longer appears that competency-based training programs are the exception, but the norm. Chart 1 indicates the popularity of using competencies in America's fire departments, regardless of the type of service delivery.

Appendix B contains the final result of this research project, a competency-based training program for newly hired personnel of the Willoughby Hills Fire Department. This program is comprised of local standards as well as having NFPA standards mixed in where appropriate. The program is a 40-hour program that will be required of all newly hired personnel, regardless of their experience level. There are tests as well, based on specific criteria set forth by the department. The program does allow for students to move through the program at their own pace.

DISCUSSION

As noted by Estepp in 1992, the fire service struggles with difficult issues such as funding, litigation, and motivation of its employees in regards to training. In speaking with other Chief officers, these problems continue today and are a concern to the administration of the Willoughby Hills Fire Department. Competency-based training programs can help positively

address all of these issues with outcomes that will benefit the individual fire fighter as well as the department.

Training is an issue that affects every fire department across the United States, whether they are fully paid or volunteer. This issue impacts each department in many areas such as legal liability, service delivery, employee morale, and operations, just to name a few. While the Willoughby Hills Fire Department has always desired to have a well-trained staff, the research shows that the current training program for newly hired employees is dangerously inadequate. Employing personnel who work on other area departments has advantages and disadvantages. One major advantage is that our department obtains the benefit from the training offered the individual from his/her other department. This allows the department to have well-trained personnel in the skill area of fire fighting at a reduced cost. In contrast to this, the disadvantage is that without well-defined competencies for our personnel, our department is somewhat at the mercy of other department's training programs.

The study found that the overwhelming majority of departments surveyed were using competencies within their department. This finding was similar to an earlier finding that there was interest in competency-based fire fighter training (Witmer, 1983). Contrary to Witmer's (1983) statement that departments are ignorant of the pros and cons of the training, education, and testing, the departments surveyed appear to be well aware of the usefulness of competency-based training as a method to raise the level of professionalism within our industry. Additionally, the departments surveyed appear to have a firm grasp of the benefits of training, education deliveries, and testing.

It further appears that departments have realized the benefits of developing their own standards as well as testing. This coincides with the findings of Smith and Merchant (1990) that

indicate practical exams allow the employee to be tested in situations that clearly resemble their jobs. Although many in the fire service feel that the goal of our service delivery is basically the same all over, it can not be disputed that there are many different methods that can be utilized to accomplish this goal.

In 1995, Curtic stated that departments need to be more aware of what will increase their effectiveness as they continue to compete with other municipal agencies for scarce taxpayer dollars. It appears that by utilizing competency-based training not only in training but for other uses as well, the departments have realized a method to make them more effective and hopefully, more successful in securing tax dollars. Part of this effectiveness would be improved supervision.

On a nationwide basis, it was found in departments of 100 personnel or less that supervisors have little information to effectively evaluate the performance of probationary personnel (Bollinger, 1994). The study shows that departments that are using competency-based training programs have corrected this area of concern. Departments that are using competencies are also using them as part of the evaluation process. This should assist supervisors, who before had limited information or guidelines to evaluate personnel, in their task of properly evaluating employees. Some departments, to assist in determining employee retention, are also using competencies. This provides the department with a solid defense in a wrongful discharge lawsuit.

While the survey sample size was small, there seems to be strong evidence that a competency-based training program is one of the essential tools for the future survival of fire service agencies. The study identified many positive benefits for the initiation of this type of training program, not only for newly hired personnel but for current personnel as well. There is

little doubt, if any, that proficiency in the skills of fire fighters will lead to a reduction in fire losses. Being a small department with few actual fire situations, the best way to ensure that our personnel are proficient is to have them prove themselves in situational testing.

Our department, like many others, is faced with the everyday challenges of training our staff to meet the needs of the community. This training should be specific to the community and allow us to test our employees in situations that clearly resemble their job assignments in order to ensure that the required task is mastered. By utilizing the competency-based training program outlined in Appendix B, the performance results of the trainee would be immediately visible. This immediate feedback would allow the instructor to realize where additional training may be necessary. This method would be much more efficient than training the employee with no evaluation or feedback and finding out on the emergency scene whether or not they have mastered the skills necessary, which is the current method used by our department.

The adoption of the program outlined in Appendix B would help reduce, if not eliminate, the problem of instructors teaching personnel to their own standards. These personal standards frequently do not align with the standards of the department. This method of training has caused difficulty within the department due to the variety of perceived "acceptable methods" that are utilized. The result has been that personnel have been trained in unacceptable methods. Additionally, personnel have been disciplined for completing a task incorrectly, when in reality, the individual was completing the task using a method that was acceptable to the person who taught him/her. This causes confusion for the employee, erodes morale of the employee, and violates the standard management principle of unity of command.

The organizational implications for the department are very clear. The advantages of competency-based training programs found greatly outweigh the few disadvantages identified.

The department could continue its course and make no changes to the current training program. By not utilizing a competency-based training program, the department will continue to needlessly expose itself to liability, suffer diminishing morale and internal personnel problems, and face declines in future service delivery quality which are unacceptable to the citizens we serve.

The second option for the department is to make immediate changes to the training program and adopt the program as outlined in Appendix B. This program, as outlined, would only begin to correct long-standing problems within the department. However, the effects would not only be positive but long term.

RECOMMENDATIONS

The training program of the department for newly hire personnel should be converted to a competency-based program. Initially, the training program for newly hired employees in Appendix B should be instituted for the next class of employees, which is scheduled to begin November 1, 1998. This program is well structured and will help eliminate some of the problems found from using the former program. This program will assist not only the students but the instructors as well. For the students, the program offers a specific set of goals they must achieve prior to working station duty. The new employees will know exactly what is expected of them. This will ease their transition into working on duty as well as all employees will know what to expect of the new employee.

The immediate feedback will benefit the student as well as the instructor. The student will be well aware of when his/her goals are met. This will allow them to remain up to date with their progress and areas of deficiency. This should increase their chances of successfully completing this program. For the instructor, the program will allow immediate feedback from

the student so that they may know where to concentrate their efforts or if they can move more quickly with instruction. It also will provide each instructor with consistent information so that all students receive the same message.

For the department, the advantages are many. The program will provide a well-documented record of the performance of the newly hired employee. This will help the department in the event of litigation, but may also be of assistance when considering retention of the employee at the end of the probationary period. The program will provide consistent instruction to employees, thus reducing the variety of perceived acceptable methods of operation currently in place. As this program is expanded to the overall training program of the department, this should lead to safer operations at emergency scenes. The program will also provide defenses to the many legal challenges the department may face. The competencies taught in the program can be used as defense shield in a courtroom setting.

The long-term benefits will be that there will be less dissention between how personnel are trained, thus improving morale. Additionally, there will begin to be consistent performance from employees. This will lead to improved department performance and improved public image. Any improvement of the public image will assist in future endeavors to fund the department over and above current funding levels.

REFERENCES

Assessing Clinical Performance – Where do we stand and what might we expect? (1995, September 6). JAMA, 274, 741-743.

Bollinger, Frank. (1994). Probationary Firefighter Competency-Based Training Program. Emmitsburg, Md.: National Fire Academy Learning Resource Center.

Curtic, David D. (1995). The Effects of Technical Certification Training on Fire Engineer's Performance. Emmitsburg, Md.: National Fire Academy Learning Resource Center.

Deming, Basil S. (1982). Evaluating Job-Related Training Programs: A Guide for Training the Trainer. Washington, D.C.: American Society for Training and Development.

Estepp, M.H. Jim. (1992, Fall). In Search of Fire Service Professionalism. IAFC On-Scene, 3-7.

Federal Board of Vocational Education. (1931). Firefighting: An Analysis of the Fireman's Job, with Suggestions as to the Organization and Operation of Training. Washington D.C.: Author.

Larson, George E., (1990). Training for the 1990's. Emmitsburg, Md.: National Fire Academy Learning Resource Center.

Rukavina, John D. & Stittleburg, Phillip C. (1998, September) Trying to Stay Out of Court: Does Meeting Standards Lower my Liability? Seminar presented at Fire-Rescue International, Louisville, KY.

Smith, Jack E. & Merchant, Sharon. (1990, August). Using Competency Exams for Evaluating Training. Training and Development Journal, 65-71.

Walker, Susan. (1989, Winter). CBE and Fire Service Instruction. Speaking of Fire, 5-7

Willoughby Hills Fire Department. (1991). Basic Training Outline.

Willoughby Hills Fire Department. (1994). Policies and Procedures Manual.

Winters, Dawn. & Latham, Gary P. (1996, June). The Effect of Learning Versus Outcome Goals on a Simple Versus a Complex Task. Group & Organization Management, 21, 2, 236-239.

Witmer, David. (1983, October). Competency-Based Training. Fire Engineering, 44-46.

APPENDIX A

Charts of Survey Results

Thank you for participating in my EFO research project. I am researching the use of competency based training in the fire service. Please take a few minutes to complete the survey below. ***Please mark all answers that apply***. Again, thank you.

1. Does your department have identified and defined competencies for your line fire personnel?

   Yes ☐ **No** ☐

   If you answered yes to 1 please answer 2 - 9.

2. What type of competencies were referenced to create yours?

   NFPA ☐ **OSHA** ☐ **Local** ☐ **Other** ☐

3. Do you provide instruction to personnel in order to achieve these competencies?

   Yes ☐ **No** ☐

4. What delivery system was used to train the personnel?

   National Fire Academy ☐ **State Fire Academy** ☐ **County Training Academy** ☐

   In House ☐ **Community College** ☐ **Other** ☐

5. Do you use criterion referenced testing in your training program?

   Yes ☐ **No** ☐

6. How was the testing developed?

   IFSTA ☐ **In House** ☐ **Private Company** ☐ **Other** ☐

7. How are competencies used by your department?

   Promotionals ☐ **Evaluations** ☐ **Retention** ☐ **Initial Hiring** ☐ **Other** ☐

8. Do you feel your department has benefitted from competency based training?

   Yes ☐ **No** ☐

9. If yes to # 8, how?

   Consistent performance ☐ **Evaluation tool** ☐ **Less discipline** ☐

10. How are your department's training requirements established?

    Policy ☐ **Labor Contract** ☐ **Government Mandate** ☐ **Other** ☐

11. How many sworn personnel in your department? ☐

12. What type of service delivery best describes your department?

    Career ☐ **Combination** ☐ **Part paid** ☐ **Volunteer** ☐

Thank you for supporting the Executive Fire Officer Program

Chart 1 - Departments with identified competencies

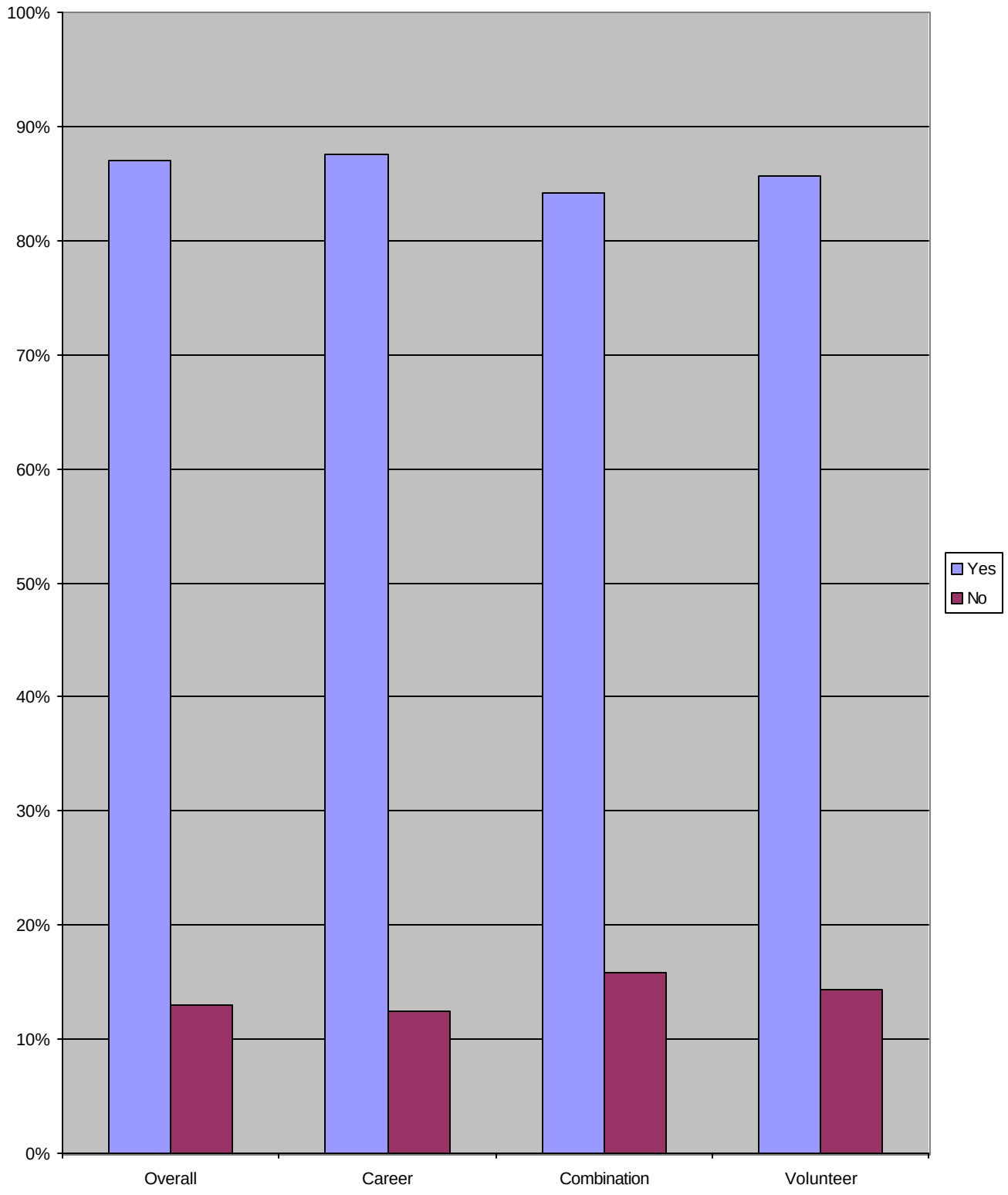


Chart 2 - Which agencies influence development of competencies

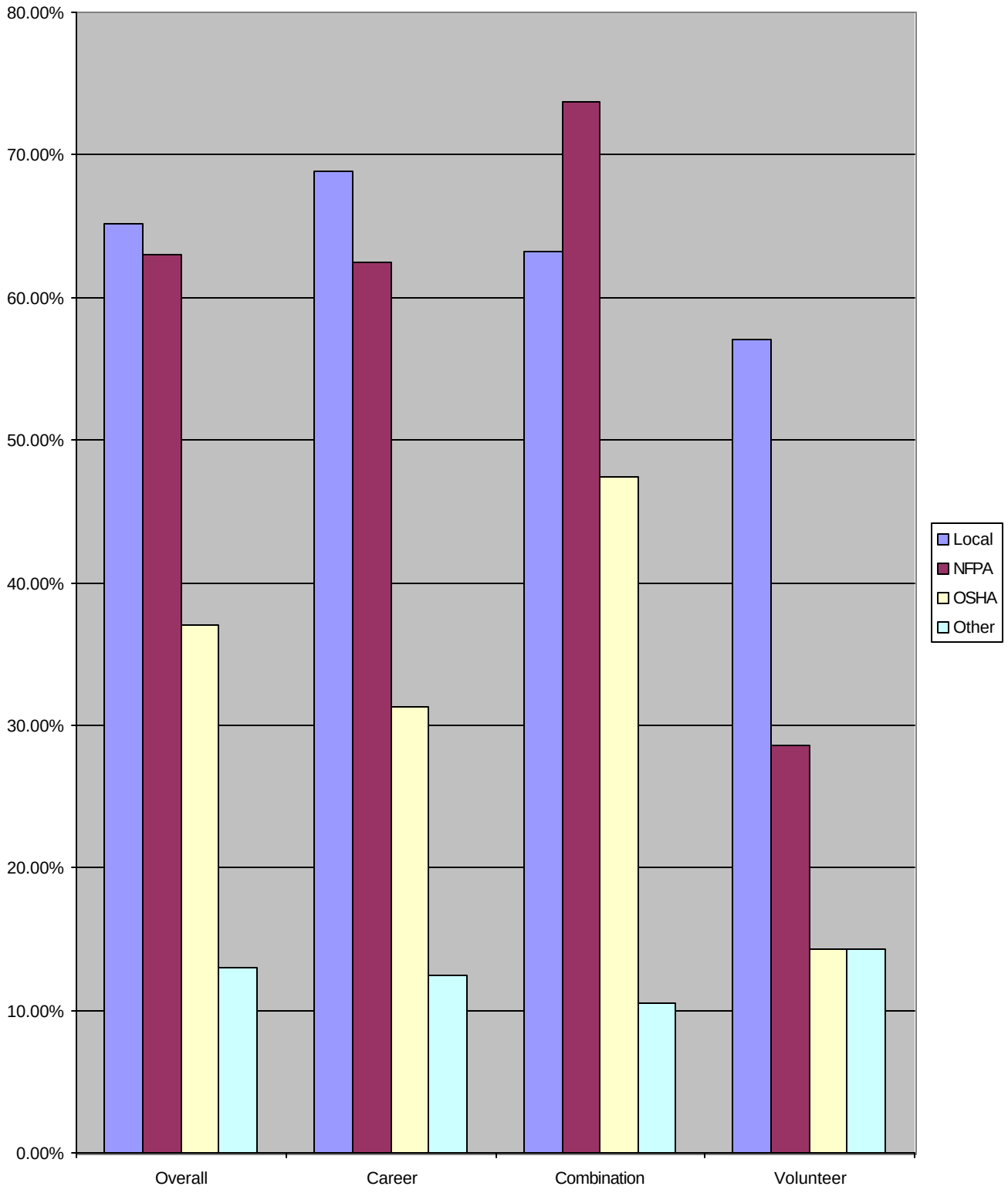


Chart 3 - Delivery systems used to instruct competencies

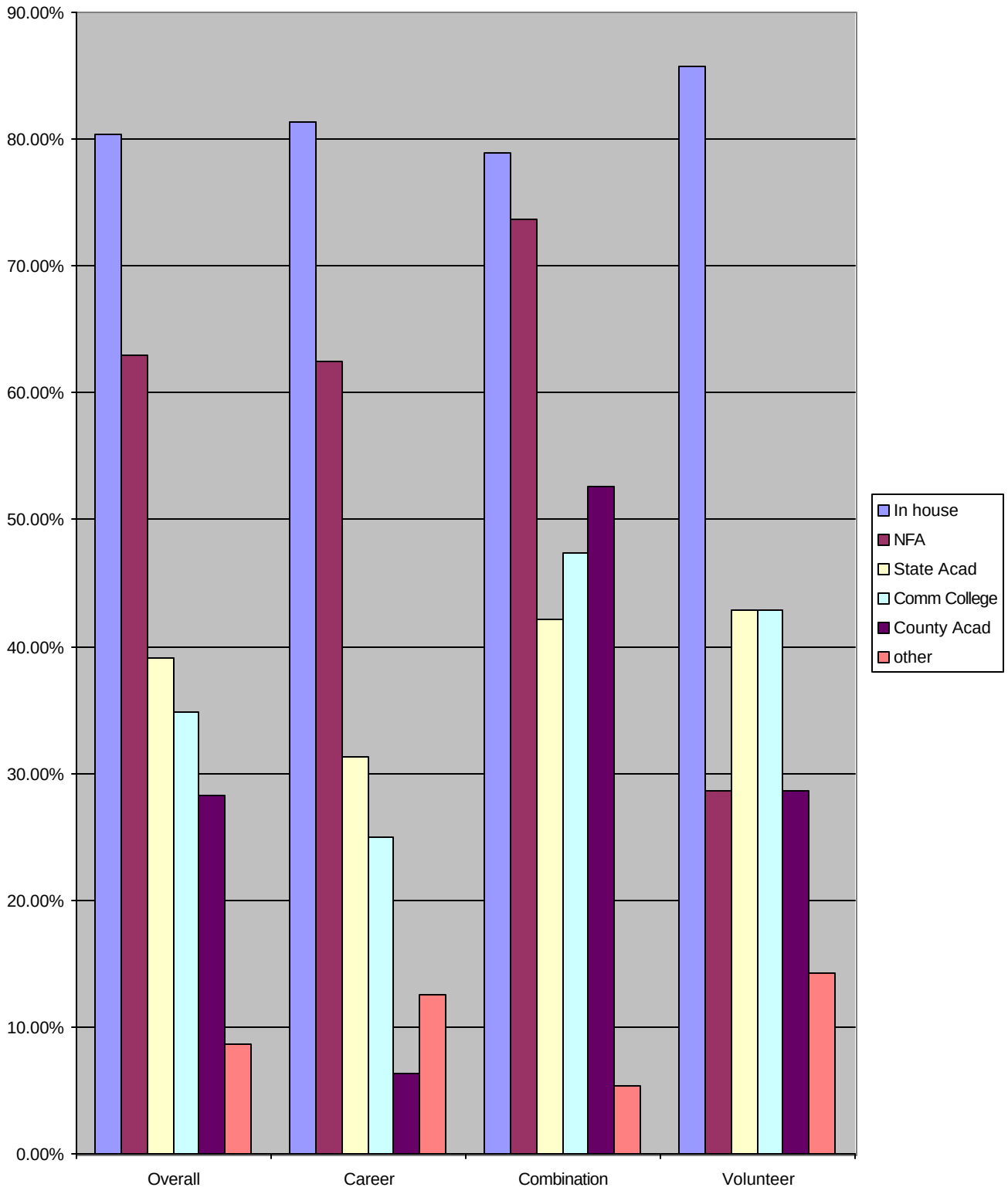


Chart 4 - Influences for test development

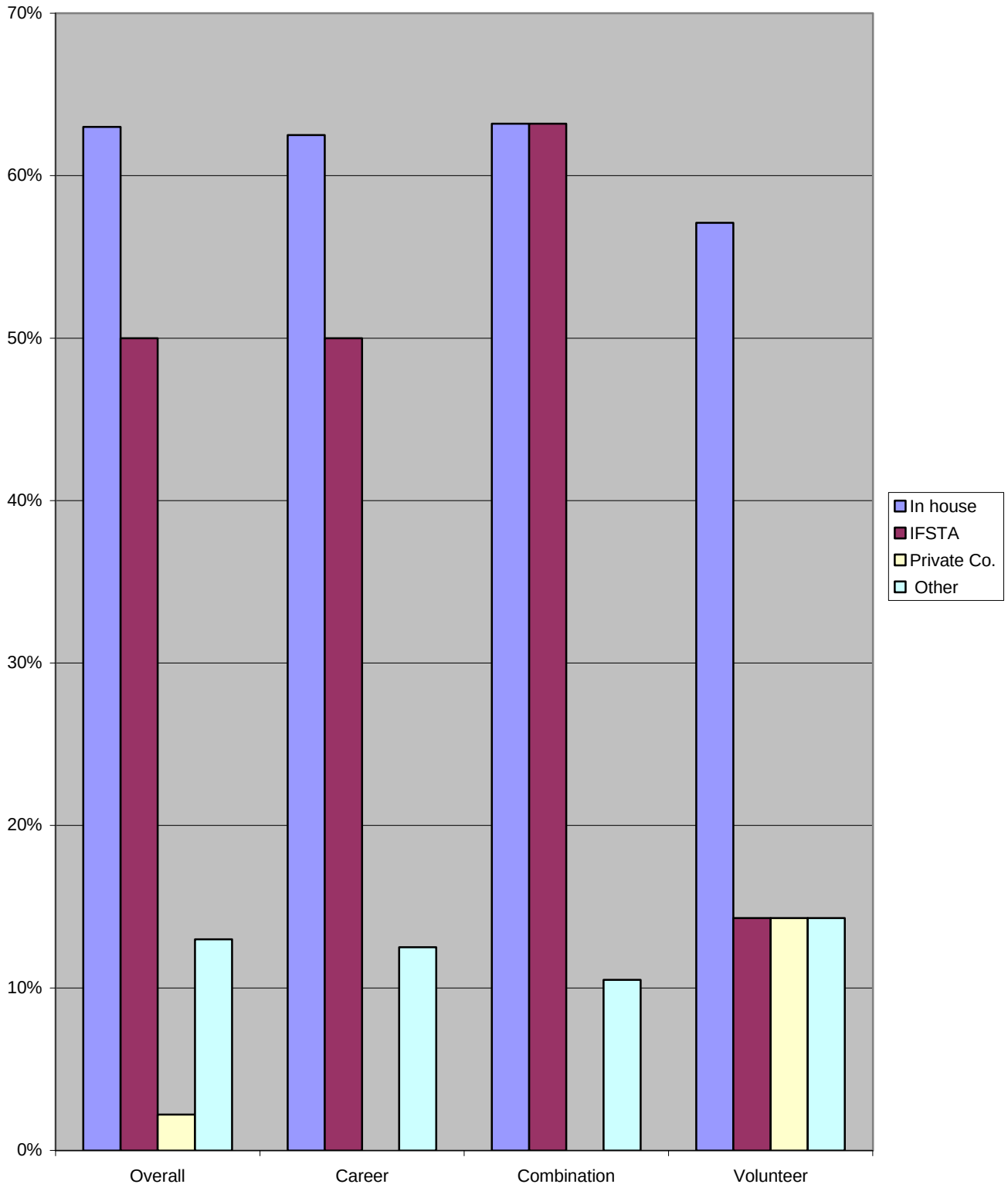


Chart 5 - Other uses of competencies

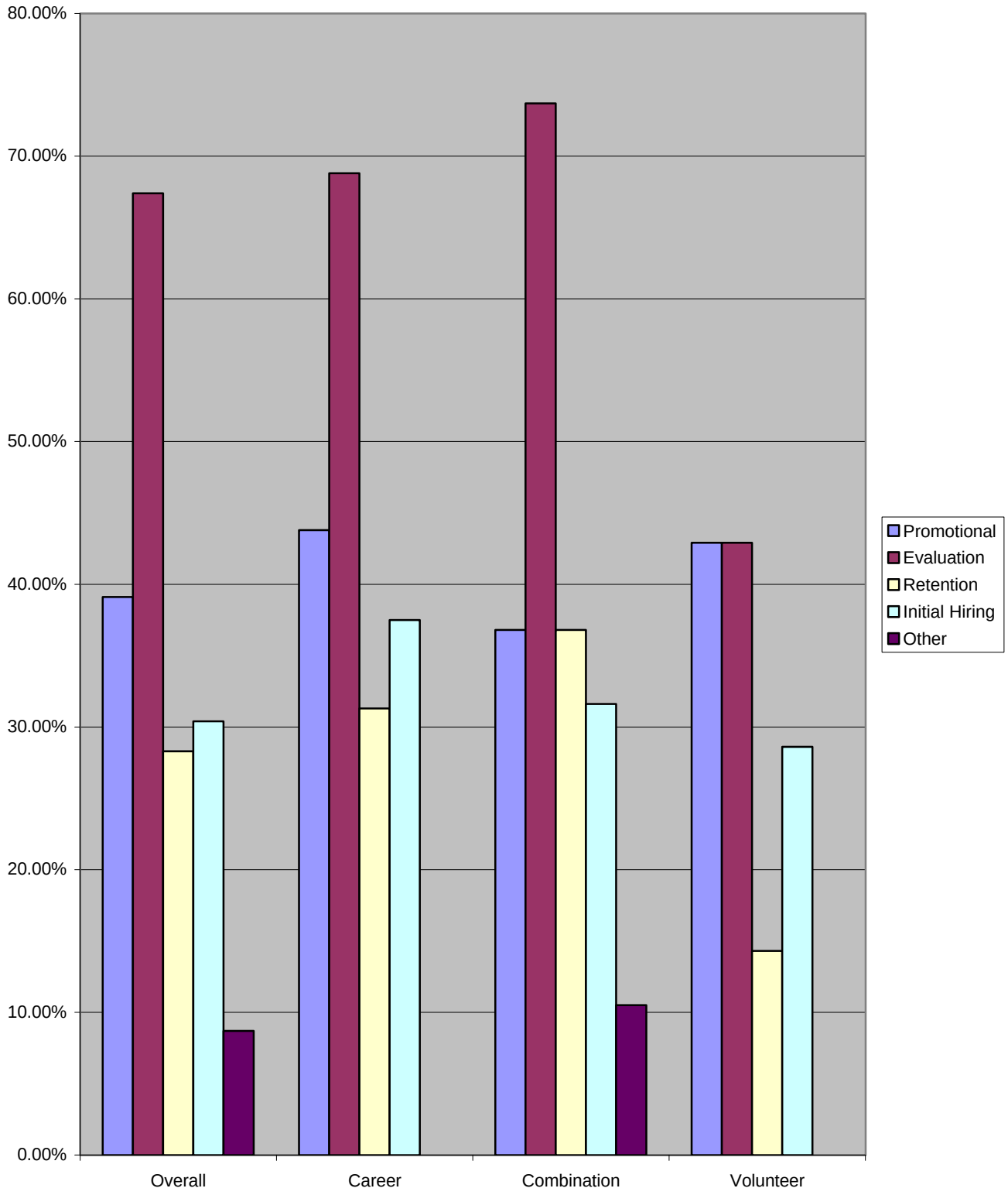
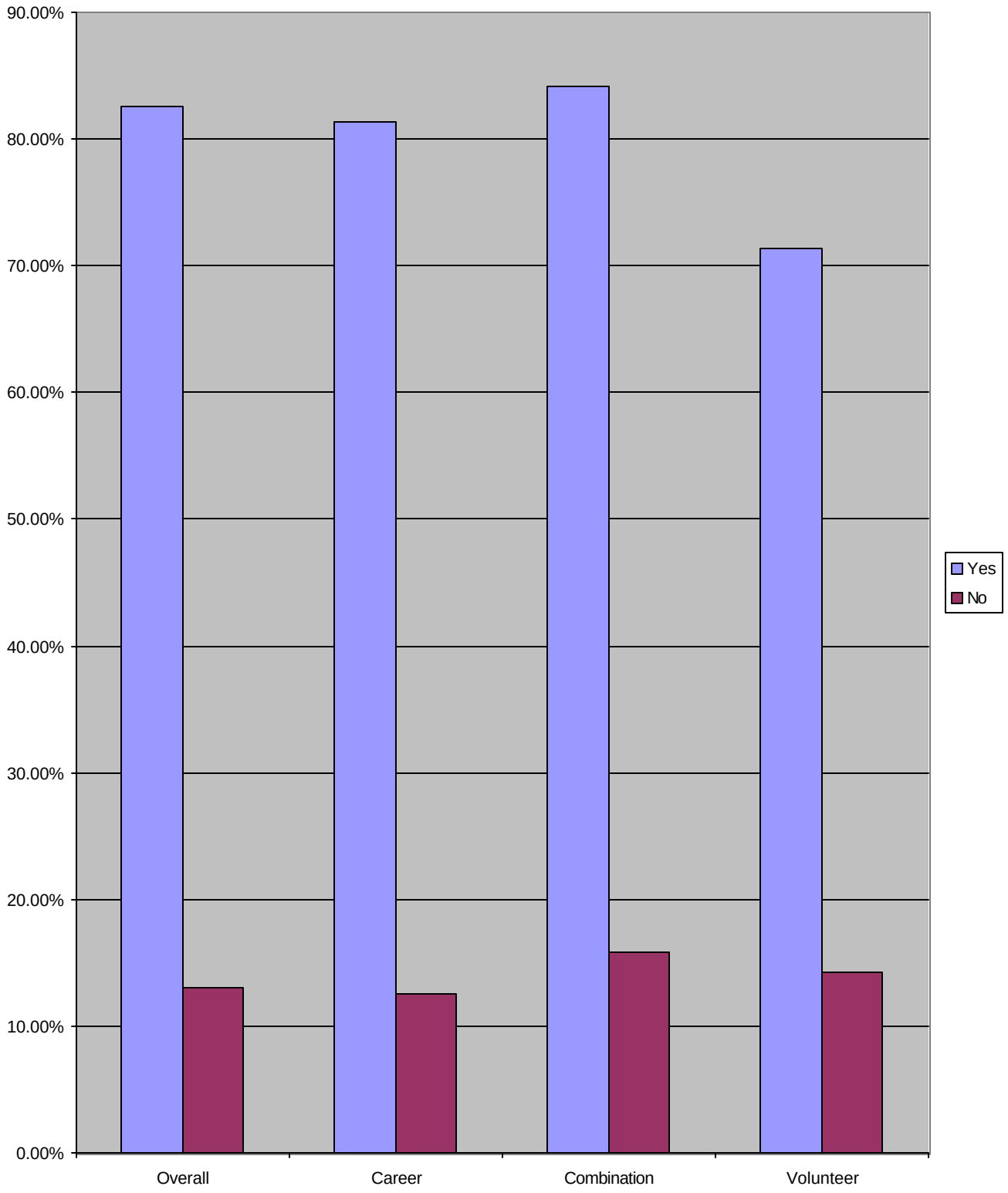


Chart 6 - Are departments benefitting from competencies



APPENDIX B

Training Program for Probationary Employees
Of the
Willoughby Hills Fire Department

Willoughby Hills Fire Department
Basic Training Outline

Welcome and congratulations! You are starting on your journey to become a part of the long-standing history of the Willoughby Hills Fire Department. This book has been developed to give you significant insight into the history of the department as well as what skills you will need to be successful.

The demands of the fire service is increasing at a very rapid rate. When our department began in 1947, the expectations of the citizens was for fire suppression mostly. Now, fire suppression comprises the minority of our job. The demands of the citizens have expanded to include emergency medical services, hazardous materials response, heavy rescue, technical rescue, and fire prevention duties, just to name a few. Consequently, the fire service is composed of men and women who have special talents, skills, and education to meet these challenges. Willoughby Hills is no exception to this trend. We provide the citizens of the community with a variety of services and strive to educate and equip our personnel to accomplish the goals set forth.

Combine the education, training, and equipment with hard work, team work, and the proper attitude, and there is nothing that we, as a team, can not accomplish. Below is some advice copied from a very knowledgeable Fire Chief, Alan Brunaccini of Phoenix, Arizona. Read it, remember it, and practice it when you can. It's not a guarantee for success, but it will put you on the right track. Only you can guarantee your success.

- Show up
- Work hard – Get the job done
- Never give up
- Trust is everything
- Act like a worker
- You own your own reaction
- Talk less / listen more
- Never stop learning (from everyone)
- Embrace change and respect the past
- Keep it simple
- Be honest
- If you don't know, ask
- Be careful of what you take seriously – egos eat brains
- Don't snivel
- Take care of Mrs. Smith
- Be tough – Get through it, then get over it
- Be nice …. Be happy
- Don't rat out your friends – fix it inside
- Life is not perfect

The purpose of this manual is to provide a systematic approach to the training of Willoughby Hills personnel to insure a minimum level of competence and to provide a clear means of cross checking their training progress.

Mission Statement

As dedicated members of the Willoughby Hills Fire Department, we shall be committed to ensuring the safety and protection of the citizens in our care from emergencies by providing a properly equipped, well trained, professional staff; to be responsive to the needs of the community; to cooperate with various governmental agencies, not restricted to Willoughby Hills, when such cooperation is desirable and/or necessary; and to provide the highest level of service when called upon.

In 1946, the area now known as the City of Willoughby Hills was the southwestern section of sprawling Willoughby Township, which also contained all of the present City of Eastlake and the western portion of the City of Willoughby.

Fire service was provided from a township station located on Route 20 about two miles west of Route 91, and ambulance service came from an undertaker's garage in Willoughby.

Route 91 running southerly from Route 84 went down a steep grade into a ravine, through an 'S' curve, then up a grade of about 17% in order to get to the southern township area.

Emergency response times, particularly during wet or snowy seasons, were slow, resulting in several severe fire losses.

A group of concerned citizens petitioned the township trustees to provide a fire station in the area. The trustees offered apparatus only, if the group would provide its own station and firefighter personnel. The Garfield Volunteer Fireman's Association (named from the Garfield School) was formed in the spring of 1947, and the trustees loaned them a 1936 open cab pumper which was housed in Charlie Schumacher's garage on Route 6 just east of Route 91. The founding group of the Garfield Volunteer Fireman's Association consisted of:

George Granger John Hitchcock Gale Kennelly Victor Leo
Robert lillich Elton Lindsay Robert McKay William Myers
Gustave Riss Charles Schumacher Carl Selig Donald Stark
Joseph Sturm Melvin Sweetapple

The Association elected Gale Kennelly as Chief, along with officers Leo, Myers, Schumacher, Selig, and Sweetapple.

Citizens and members contributed money, materials, and labor toward building a fire station at 2768 Stark drive on a lot owned by John Stark. This building of two bays and a meeting room was completed in June 1948, and housed a 1943 pumper worth $12,000 which was provided by the township.

During the period of 1949-1950, the township was carved up by the formation of the City of Eastlake to the north and the annexation of the central area to the City of Willoughby, leaving the remainder under the leadership of new trustees.

The Garfield Division now became in fact the Willoughby Township Fire Department; however, the Garfield Volunteer Fireman's Association was maintained for control of donated funds. The township paid utility and fuel bills, while the association provided fire coats, boots, helmets, gloves, and accessory items for the trucks. Members were paid $1.50 for attending fire drills and $2.00 for each emergency response. These funds were donated back into the association treasury.

The ladies' auxiliary, known as "The Sparks," held dances, bake sales, carnivals, shows and other events to raise funds which were either donated directly to the association, or used to purchase items requested by the Chief.

Incoming fire and rescue calls came into the homes of Kennelly, Rowles, and Schumacher. Outgoing dispatching was done by Eleanor Kennelly, Billie Rowles, and Shirley Schumacher via telephone to other "Sparks," who continued the relay until all firefighters were alerted. The ladies of the Sparks should be highly commended for providing such strong support.

During the years 1950-1953, pressure was generated to annex the western portion of the township to Wickliffe, leaving the balance of the township incapable of self support, and thus possibly becoming annexed to the City of Willoughby. The fire department would be eliminated and all assets would be turned over to annexing entities.

A special election was held on February 1, 1954 to incorporate the remaining area into a village. The vote was 759 for and 256 against; thus the Fire Department was preserved and the Village of Willoughby Hills was born.

The name of the fire department was changed to the Willoughby Hills Fire Department, and continued to operate as a volunteer service for many years. In 1954, the Fireman's Association donated the Stark Drive station to the village. The Sparks (who later became the "Yellow Birds") continued to raise funds for the department through the mid-seventies. Population grew to over 5,000 residents, and in 1973, Willoughby Hills became a city.

In 1958, the fire department obtained a Howe 500 GPM pumper with a 1,000 gallon booster tank on a Ford tilt cab chassis for $18,000. This was not purchased with new tax monies, but with what remained from old Township Fire Department funds. The engine served the city well into the mid 1980's.

On April 26, 1960, Willoughby Hills Council accepted, with regret, the resignation of Gale Kennelly as Fire Chief. Lt. Charles B. Schumacher was appointed Chief at the next council meeting.

In late 1961, Willoughby Hills Village installed a $96 per month alert hook-up system for its volunteers. The heart of the system was located at Wickliffe City Hall, where a "hot" telephone was within easy reach of the police desk. When someone from Willoughby Hills called to report an emergency the police would dial a special code a record a brief message stating the location, severity, and other essential information about the fire. After hanging up, phones in the homes of 28 volunteers would begin to ring, relaying the information about the fire. As a back-up, a fire siren on top of the Village Hall on Chardon Road would be activated.

The Willoughby Hills Fire Department was the first in the area to break with using the traditional red fire trucks when it purchased a yellow and white engine in 1968. Put into service in 1969, the truck had a manual transmission with a gasoline engine, a 1000 GPM pump and an on-board foam system. Chief Schumacher opted for the color scheme citing studies on vehicle visibility.

The Willoughby Hills Fire Department has a very rich history not only in local politics, but at the state level as well. Nowhere has the department had a more profound or sweeping effect state-wide than in its involvement in the advent of firefighters as paramedics.

In December of 1971, Chief Schumacher announced that fourteen men from his department, along with firefighter from Wickliffe and Richmond Heights Fire Departments, would begin "first aid" training at Richmond Heights General Hospital, among the very first in the state of Ohio to do so. The program consisted of fifty-four hours of classroom instruction followed by in-house clinicals at a cost of $15 for textbooks per student. The hospital provided all the technical support for free. The very first graduating class included Willoughby Hills Firefighters Charlie Schumacher, Henry Kline, William Heckler, Bud Scott, Peter Mortenson, and William Moster.

Chief Schumacher also was instrumental in introducing legislation requiring smoke detectors be placed near bedrooms in multi-tenant buildings and on May 9, 1974 Willoughby Hills City Council passed this legislation. A state code was adopted in 1981 mandated smoke detectors in multi-tenant buildings.

On February 1, 1974 William Moster was appointed a full-time firefighter and was assigned to work day shift with Chief Schumacher from 8:00 A.M. to 5:00 P.M. at an annual salary of about $10,000.

The Department began twenty-four hour a day coverage, seven days a week on June 15, 1974. Volunteers who were paid $3.00 an hour manned the station.

In the fall of 1977, the voters of the city approved a 1.8 mill fire levy. The intent of the levy was to obtain a new engine, mini-pumper and ambulance, repair existing equipment, and to provide additional station space. On December 15, 1978 ground was broken for the new fire station to be built at 35455 Chardon Road at a cost of $230,000. On February 6, 1980 the fire department moved from the Stark Drive station into their new home. On May 21, 1981 the Stark Drive station was sold to Fred Marinko for $135,342 now home to Marinkos' Fire House Restaurant. An addition to the station was added in 1982 to the west side of the structure

After 35 years of distinguished service, Chief Charles B. Schumacher retired on March 26, 1982. William J. Heckler, a 30 year old Captain with the Willoughby Hills Fire Department was appointed as his successor.

A serious push was initiated by Chief Heckler to procure the first full-time fire/medics in 1986. In May of 1987 the Fire Department hired Bill Shaw, Mike Santilli, Mark Leisure, Rich Harmon, Brian Hric, and Scott Mlakar as the first full-time fire/medics. As this evolution progressed, Mike Santilli, Brian Hric, and Rich Harmon would be promoted as the first full-time lieutenants.

After twenty-five years of service, thirteen of them as Chief, William J. Heckler retired from his position with the Willoughby Hills Fire Department on February 22, 1995. Chief heckler took a medical retirement after suffering a back injury resulting from a fall in 1994. In July of 1995, Walter A. Knapp was named as his successor.

In August of 1996, the Fire Department lost another of its long-time members to retirement. Captain William Moster, in charge of the Fire Prevention Bureau, EMS instructor, and unquestionably a mentor to many Department members, left the service after having served for thirty years. He was replaced by William Shaw.

In 1998 Chief Walter A. Knapp left the Willoughby Hills Fire Department and was replaced by Chief William J. Shaw that same year. Lt. Harmon was promoted to the vacant Captains position.

MAJOR INCIDENTS:

1959, January	Chagrin River crests 16.5' five fatalities
1961, January	Elsworth Cabinet Company River Road
1974, March	Winchester Hills Apartment double fatality 9th floor
1977, May	Huston Estate 6725 Waite Hill Rd
1977, June	Pine Ridge Apartments 2255 Lobby
1982, March	Firefighters Louie Gravino, Dave Nelson roll heavy rescue 1241
1984, August	Kennelly Drive fatality
1985, December	Winchester Hills 10th floor
1986, May	1253 struck by drunk driver Chardon @ SOM
1992, June	Evangelical Friends Church SOM Center Road
1995, November	Bishop Park Apartments Parking Garage

Because the City of Willoughby Hills is situated directly in the approach path of the Cuyahoga County Airport, the Department has been involved in the aftermath of several plane crashes since 1970:

- January 29, 1970 a twin engine turbo-prop crashed killing the co-pilot and injuring the other three occupants
- September 18, 1970 a single engine plane crashed in the North Chagrin Reservation, injuring all four aboard
- January 25, 1974 a twin engine plane crashed into a home on Bishop Road Killing four passengers on the plane and two in the residence
- May 5, 1975 a single engine plane crashed two doors east of city hall in the woods off Chardon Road. The owner of the plane was killed while the pilot and another passenger were injured

- May 20, 1990 a single engine plane crashed into a home on Tall Tree Trail the pilot was killed the occupant in the home was injured
- January 22, 1993 a single engine plane crashed into the woods behind a home on Erich drive the pilot feathered the plane into the tree tops and walked away unscathed

As you join the Willoughby Hills Fire Department you can see from this brief history a sense of dedication and pride. A history that is rich in commitment, innovation, generosity, and grass-roots volunteerism. From the ladies' auxiliary, the "Sparks," of the 1950s and 60s, to the current day efforts of the Willoughby Hills Part-time Firefighters Association and the Willoughby Hills Professional Firefighters this dedication and pride will continue well into the 21st century.

Engine 1213

1213 is a 1986 Sutphen Custom Pumper equipped with a 1500 gpm Hale pump and a 1000-gallon fiberglass tank. The engine is a Detroit Diesel 6V-92TA that develops 350 horsepower. It has an Allison HT 740D four speed automatic transmission. Brakes are air disc at all four corners. The vehicle is just under 30' long and weighs 32,850 lbs. Cost: $160,000

1. Equipment - Compartments

   All equipment in each compartment is to be identified for the firefighter and its function clearly explained. After such instruction, the firefighter shall be able to:

   a. don and operate the Survivair SCBA units properly
   b. operate the Stihl saw safely, change blades and be familiar with maintenance procedures
   c. identify the type of blade and it's appropriate use
   d. operate chain saw safely, change chains and be familiar with maintenance procedures
   e. operate Winco 5KW generator, both in the manual and electric start modes, be familiar with maintenance procedures
   f. operate the Tele-Lights and breaker box
   g. operate the gasoline blower and be familiar with maintenance procedures
   h. the firefighter shall demonstrate, while functioning as part of a two-person team, the proper removal and set-up the 2000 gallon Fold-a-Tank including the use of the ground sheet. The firefighter shall also demonstrate the proper procedures for draining, packing and replacing the Fold-a-Tank.

2. Equipment - Mounted on the vehicle

   All equipment mounted on the vehicle is to be identified for the firefighter and its function clearly explained. Subsequent to such instruction, the firefighter shall be able to identify all such equipment and define the primary intended use of this equipment. The firefighter shall demonstrate the ability to remove and replace all mounted equipment.

   a. 24' extension ladder
   b. 14' roof ladder
   c. 10' folding attic ladder
   d. Apollo monitor - set this unit up on it's portable base
   e. pike pole, pry bar, axes, extinguishers
   f. hard suction hose

3. Hose Loads

   All hose loads carried on 1213 will be identified and explained to the firefighter. Example: Crosslays are 1 3/4" hose, each line is 200' long and equipped with an automatic nozzle that can deliver up to 200 gpm and still be handled by one or two firefighters. It is a relatively light, maneuverable line that provides both quick attack and fairly heavy fire knockdown capability.

4. Walk-Around Inspection

   Confirm that all equipment is present and secured, all compartment doors are closed, the Tele-lights are bedded, and the tires appear OK. Check under the truck

and around the wheels for obstructions. Make sure that the firefighter is aware that this type of check is required before the truck is moved.

5. Engine/Transmission/Vital Fluids check
   Check:
   a. oil
   b. coolant
   c. power steering fluid
   d. ATF (explain proper method of checking the level of ATF)
   e. primer oil
   f. windshield washer fluid

6. Cab: Driver's controls, Lights, Sirens, Radios

   a. Dashboard and Console: Identify and explain every switch, gauge and light on the dashboard and console. Include the air restriction indicator and emergency engine shutdown. Stress to the firefighter the importance of monitoring the gauges. The compartment light switch must be left in the "OFF" position until the truck is parked and the lights will be used. Turning this switch "ON" disables the compartment open warning light and buzzer
   b. Steering wheel: demonstrate the telescoping/tilting adjustments
   c. Radios: Explain the controls for the radios, both front and rear control. Also explain the operation of the portables
   d. Other cab contents: Run, preplan, map, MABAS books, Survivair unit

7. Pump Operations

   a. review demonstrate the proper engine starting technique. Stress the importance of starting the engine and letting it idle until the oil pressure stabilizes before placing the transmission in gear.
   b. shifting from road to pump
      1. stop truck with service brakes, place transmission in "N"
      2. move shift lever from road to pump, make sure that the locking collar pops into position

1. place transmission selector in "1-4". Green light should illuminate and the speedometer should register
2. set the parking brake
3. if the road-pump selector will not move past the half-way point, place the selector back in the road position, move the truck a few feet and try again
4. If the road-pump selector moves more than half way to the pump position but not far enough to lock into position, maintain traction on the lever while placing the truck transmission into "1-4", it should drop right into pump gear. If this is not successful repeat step 5
5. explain the pump panel to the firefighter, circulate water from the tank through the pump and back to the tank. Partially close the tanks fill line and set the pressure relief valve. Explain the operation of this valve
6. Explain (basic) friction loss and street hydraulics. Identify this department's standard operating pressures: 130 psi for the pre-connected 1 3/4" lines and 150 psi for sprinkler/standpipe connections. Explain "gating back" when pumping unequal size and/or unequal length lines

a. Drafting
   The Pre-Con valve must be removed and the inlet capped. If at all possible, the suction hose should be attached to the passenger side inlet, due to the fact that the driver's side inlet has been shortened to accept the Pre-Con valve.
b. Shifting from pump to road
   1. make sure that the pump panel throttle is all the way in
   2. move truck transmission to "N", watch the speedometer at approximately 5 mph on the speedometer will jump, move the road-pump selector to the road position after the speedometer has reached 0. The lever may shake a little, this is normal. Do not grind the gears. Make sure the locking mechanism pops into position on the road-pump selector handle

8. Driver Training

a. the shift officer or designee shall take the firefighter out for a driver training evolution. Common sense shall prevail; do not take out a firefighter if the weather conditions are not favorable. Do not take out a firefighter who is not yet ready to try handling this rig in traffic
b. the firefighter shall properly perform a walk-around inspection of the vehicle prior to starting or moving it
c. the firefighter shall properly start the vehicle, monitor the engine, air and transmission gauges, and confirm the proper placement of the mirrors
d. the recruit shall properly release the parking brake and move the vehicle out of the bay

NOTE: Prior to the firefighters first trip on the roadway carefully explain the extreme turning angle this vehicle is capable of (40^{o}). Make sure the firefighter is aware of the need to make careful turns until they become comfortable with the handling characteristics of 1213. Adequate clearance around curbs, poles, signs, rocks and other obstructions must be maintained when making right hand turns. Advise the firefighter of the width of this truck (96" or 8'). This is the maximum legal width for a vehicle intended to be driven on public highways.

e. the driver's training evolution should encompass the following
    1. while driving, maintain assured clear distance; at stops always leave enough space between 1213 and the vehicle in front to allow 1213 to easily move out of traffic if dispatched on a call
    2. always use turn signals, even when changing lanes
    3. backing practice: Use a parking lot to provide a safe practice area for the firefighter to practice backing. Six traffic cones set in a 10' x 30' lane are useful in teaching the firefighter to use both sets of mirrors
    4. utilize the drivers rodeo drill stations
    5. instruct the firefighter in the proper method of "dressing" a hydrant; have the firefighter demonstrate the same. Make sure to stress the proper wrapping of the hydrant for the safety of the firefighter.
    6. instruct the firefighter in the proper method of tying into a standpipe/ sprinkler connection, have the firefighter demonstrate the same.

Upon completion of the above, the firefighter shall be able to identify, retrieve, and operate the equipment carried on and in 1213. The firefighter shall be able to operate the vehicle in both the pump and road modes. The firefighter will not be considered an "expert" pump operator as this takes time and experience.

1213 Pump Panel

Willoughby Hills Fire Department Standpipe locations

Atlantic Manufacturing (front bldg.) ** Southeast corner lawn
Baker's Square **on Chardon Rd. (in front of restaurant)
Blockbuster Video **Northwest drive (off Plaza Blvd.)
Bishop Park 27645 (North) ** on ends of building
Bishop Park 27700 (South) ** East end/Northwest corner of building
Bishop Park 27500 (West) ** on ends of building
Chagrin North I (34900) ** rear of building (in parking lot)
Chagrin North II (34950) ** rear of building (in parking lot)
Chagrin North III (35000/S&P Solutions) ** West side lot
Chagrin North VII (35040/Medical offices) ** NE corner of building
Corporate 90 ** on SOM Center (in front of building)
Cleveland Clinic (Corp. 90) ** front of building (near front door)
Eaton Corp. ** Chardon Rd. and driveway
Eddy's Bike Shop ** North side (next to building)
Emerald Lakes Plaza ** Southwest drive (off Emerald Lakes Dr.)
Erie Center ** on Chardon Rd. (in front of bldg. next to hydrant)
Friends Church (rear bldg. only) ** Northwest corner of bldg.
Gale's Garden Center ** on SOM Center
Hills Dept. Store ** on Bishop Rd. at Plaza Blvd.
Loehmann's Plaza (shops of Wlby Hills)
(1) Rini's ** Southwest corner
(1A) Rini's ** behind new section
(2) Loehmann's ** rear of building
(3) CVS drug ** rear of building
(3) Manhattan Deli ** rear of building
(3) Movies 10 Lobby ** rear of building
(3) Wicker Co. ** rear of building
(3A) Movies 10 Theaters ** rear of building
(4) Office Max ** rear of building
(5) Sam's Club ** rear of building
(6) Family Toy Warehouse ** East side of driveway
Micro Products ** Northeast corner lawn (behind Atlantic MFG.)
Park Grille ** on Northeast corner of restaurant
Par Lane 2250 ** Northwest & Southeast corner of bldg.
Par Lane 2255 ** next to front doors/ Northeast corner of bldg.
Locker Room Sprinkler ** East side of bldg.
Par Lane 2260 ** Northwest & Southwest corners of bldg
Sears Hardware ** on Bishop Rd. (next to entrance driveway)
St. Noel's Church ** West side, next to car port)
Tony La Riche Chevrolet ** on Bishop Rd. & under canopy (NE side)
National Tire & Battery ** rear lot
Wlby Hills City Hall ** East side of bldg.
Wlby Hills Plaza II ** on Southwest corner of bldg.
Wlby Hills Plaza III ** on Chardon Rd.
Winchester I (27400) ** East side of bldg. standpipe connection
Winchester II (27600) ** East side of bldg.

1213 BTO
Check Sheet

	Date	Initials	Comments
1a			
1b			
1c			
1d			
1e			
1f			
1g			
1h			
2a			
2b			
2c			
2d			
2e			
2f			
3i			Preconnects
3ii			Hose beds
3iii			Other hose
4			
5a			
5b			
5c			
5d			
5e			
5f			
6a			
6b			
6c			
6d			
7a			
7b			
7c			
7d			
8a			
8b			
8c			
8d			
8e			

Engine 1214

1214 is a 1989 Sutphen custom pumper equipped with a 1500 gpm Hale pump and 750-gallon fiberglass tank, 100 gallon foam tank. The engine is a Detroit Diesel 6V-92TA that develops 350 horsepower. It has an Allison HT 740D four speed automatic transmission. Brakes are air/disc at all four corners. The vehicle is just under 32' long and weighs 34,200 lbs. Cost: $177,300

1. Equipment - Compartments

   All equipment in each compartment is to be identified for the firefighter and its function clearly explained. After such instruction, the firefighter shall be able to:

   a. don and operate the Survivair SCBA units properly
   b. operate the Stihl saw safely, change blades and be familiar with maintenance procedures
   c. identify the type of blade and it's appropriate use
   d. operate chain saw safely, change chains and be familiar with maintenance procedures
   e. operate Winco 6KW generator, both in the manual and electric start modes, be familiar with maintenance procedures
   f. operate the Tele-Lights and breaker box
   g. operate the gasoline blower and be familiar with maintenance procedures

2. Equipment - Mounted on the vehicle

   All equipment mounted on the vehicle is to be identified for the firefighter and its function clearly explained. Subsequent to such instruction, the firefighter shall be able to identify all such equipment and define the primary intended use of this equipment. The firefighter shall demonstrate the ability to remove and replace all mounted equipment.

   a. 24' extension ladder
   b. 14' roof ladder
   c. 10' folding attic ladder
   d. Apollo monitor - set this unit up on it's portable base
   e. pike pole, pry bar, axes, extinguishers

3. Hose Loads

   All hose loads carried on 1214 will be identified and explained to the firefighter. Example: Crosslays are 1 3/4" hose, each line is 200' long and equipped with an automatic nozzle that can deliver up to 200 gpm and still be handled by one or

two firefighters. It is a relatively light, maneuverable line that provides both quick attack and fairly heavy fire knockdown capability.

4. Foam System

   Explain the operation of the built in foam system and identify which crosslays they are connected to. Review the shut down procedure and the master stream foam nozzle.

5. Walk-Around Inspection

   Confirm that all equipment is present and secured, all compartment doors are closed, the Tele-lights are bedded, and the tires appear OK. Check under the truck and around the wheels for obstructions. Make sure that the firefighter is aware that this type of check is required before the truck is moved.

6. Engine/Transmission/Vital Fluids check

   Check:

   a. oil
   b. coolant
   c. power steering fluid
   d. ATF (explain proper method of checking the level of ATF)
   e. primer oil
   f. windshield washer fluid

7. Cab: Driver's controls, Lights, Sirens, Radios

   a. Dashboard and Console: Identify and explain every switch, gauge and light on the dashboard and console. Include the air restriction indicator and emergency engine shutdown. Stress to the firefighter the importance of monitoring the gauges. The compartment light switch must be left in the "OFF" position until the truck is parked and the lights will be used. Turning this switch "ON" disables the compartment open warning light and buzzer
   b. Steering wheel: demonstrate the telescoping/tilting adjustments
   c. Radios: Explain the controls for the radios, both front and rear control. Also explain the operation of the portables
   d. Other cab contents: Run, preplan, map, MABAS books, Survivair unit

8. Pump Operations

   a. review demonstrate the proper engine starting technique. Stress the importance of starting the engine and letting it idle until the oil pressure stabilizes before placing the transmission in gear.
   b. shifting from road to pump
      1. stop truck with service brakes, place transmission in "N"
      2. move shift lever from road to pump, make sure that the locking collar pops into position
      3. place transmission selector in "1-4". Green light should illuminate and the speedometer should register

4. set the parking brake
5. explain the pump panel to the firefighter, circulate water from the tank through the pump and back to the tank. Partially close the tanks fill line and set the pressure relief valve. Explain the operation of this valve
6. Explain (basic) friction loss and street hydraulics. Identify this department's standard operating pressures: 130 psi for the pre-connected 1 3/4" lines and 150 psi for sprinkler/standpipe connections. Explain "gating back" when pumping unequal size and/or unequal length lines
7. review manual operations of placing vehicle in and out of pump

c. Shifting from pump to road
   1. make sure that the pump panel throttle is all the way in
   2. move truck transmission to "N", watch the speedometer when the speedometer drops to "0" shift back into road position

9. Driver Training
   a. the shift officer or designee shall take the firefighter out for a driver training evolution. Common sense shall prevail; do not take out a firefighter if the weather conditions are not favorable. Do not take out a firefighter who is not yet ready to try handling this rig in traffic
   b. the firefighter shall properly perform a walk-around inspection of the vehicle prior to starting or moving it
   c. the firefighter shall properly start the vehicle, monitor the engine, air and transmission gauges, and confirm the proper placement of the mirrors
   d. the recruit shall properly release the parking brake and move the vehicle out of the bay

NOTE: Prior to the firefighters first trip on the roadway carefully explain the extreme turning angle this vehicle is capable of (40^{o}). Make sure the firefighter is aware of the need to make careful turns until they become comfortable with the handling characteristics of 1214. Adequate clearance around curbs, poles, signs, rocks and other obstructions must be maintained when making right hand turns. Advise the firefighter of the width of this truck (96" or 8'). This is the maximum legal width for a vehicle intended to be driven on public highways.

   e. the driver's training evolution should encompass the following
      1. while driving, maintain assured clear distance; at stops always leave enough space between 1214 and the vehicle in front to allow 1214 to easily move out of traffic if dispatched on a call
      2. always use turn signals, even when changing lanes
      3. backing practice: Use a parking lot to provide a safe practice area for the firefighter to practice backing. Six traffic cones set in a 10' x 30' lane are useful in teaching the firefighter to use both sets of mirrors
      4. utilize the drivers rodeo drill stations
      5. instruct the firefighter in the proper method of "dressing" a hydrant; have the firefighter demonstrate the same. Make sure to stress the proper wrapping of the hydrant for the safety of the firefighter.

Upon completion of the above, the firefighter shall be able to identify, retrieve, and operate the equipment carried on and in 1214. The firefighter shall be able to operate the vehicle in both the pump and road modes. The firefighter will not be considered an "expert" pump operator as this takes time and experience.

10. WRAPPING A HYDRANT

When the engine has come to a complete stop at the desired hydrant, the assigned personnel shall perform the following tasks:

a. Remove from the rear bumper and place near the hydrant:
    1. large spanner wrenches
    2. hydrant wrench
    3. single gate
b. Pull enough large diameter hose off of the engine to wrap the hydrant. Leave enough excess on the ground to provide enough weight so the engine does not drag all the loose hose to the fire scene, but rather the large diameter begins to flake off the back of the engine.
c. Make a large loop around the hydrant with the hose lying over the steamer connection end.
d. Notify the engine to proceed to the scene by either hand signals or radio communication. Make sure contact is made with the engine operator.

Once the hose is laid out and no tension is on the hose, the assigned personnel shall perform the following the following tasks:

e. Attach the single gate to a 2.5" butt in the direction of the fire ground.
f. Open the hydrant.
g. Flow water through the gate until the water is clear.
h. Shut down the hydrant and close the gate
i. Attach the large diameter hose to the steamer connection, trying to lay the hose flat to avoid excessive kinks or twisting.
j. Notify the engine operator that the hydrant is ready via radio communications.
    "Hydrant to engine 1214"
    "Engine 1214 to hydrant, go ahead"
    "Your hydrant is ready (dressed)"
    "Engine 1214 copies" (further orders will follow at this point)

Confirm orders with repeat traffic and let the engine operator know that water is coming if that was the order.

Possible orders may include but are not limited to:

1. open hydrant
2. stand by
3. report to command
4. RIC (rapid intervention crew) team

11. FLUSHING A HYDRANT

The following procedure is the basic method for flushing a hydrant whether it is at a fire scene or during hydrant maintenance program.

a. Each hydrant shall be flushed to ensure proper operation.
b. Open completely (15-20 turns) in the correct direction.
c. Open and close the hydrant fairly quickly, not so fast as to create a water hammer, but not slow enough to cause excessive vibration causing the stem-nut to damage, making the hydrant in-operative.
d. Flow water until water is clear.
e. A gate valve must be in place on the hydrant prior to flushing.

12. SPRINKLER/STANDPIPE CONNECTION PROCEDURES

It shall be the responsibility of the assigned engine personnel to provide uninterrupted sprinkler and/or standpipe water supply.

a. The following method is recommended:
    1. Once the engine is parked appropriately, place the engine into pump operation.
    2. The initial line to the Fire Department connection shall be large diameter hose (4" or 5"). A 2.5" hose line can be used as a "quick hit" to provide pressure if water is needed immediately.
    3. A minimum of one (1) large diameter hose shall be laid to the nearest appropriate hydrant.
    4. Flush the hydrant using the single gate and then attach the large diameter hose.
    5. Attach a second line of large diameter to the Fire Department connection if the first line was 2.5".
    6. These lines shall not be charged when ordered by Command, unless smoke and/or flames are showing, then standpipes shall be charged automatically.

b. The recommended pressure for supplying fire protection systems is 150 psi at the Fire Department connection.
c. Upon completion of the water supply hook-up, all personnel attached to the engine, except the pump operator, shall assist in fire suppression activities.
d. It shall be the responsibility of the engine that connects to the sprinkler/standpipe system to ensure that the control valves are in the open position.

1214 Pump Panel

1214 BTO
Check Sheet

	Date	Initials	Comments
1a			
1b			
1c			
1d			
1e			
1f			
1g			
2a			
2b			
2c			
d			
2e			
3i			Preconnects
3ii			Hose Beds
3iii			Other hose
4			
5			
6a			
6b			
6c			
6d			
6e			
6f			
7a			
7b			
7c			
7d			
8a			
8b			
8c			
9a			
9b			
9c			
9d			
9e			
10a			
10b			
10c			
10d			
10e			
10f			
10g			

1214 BTO
Check Sheet

	Date	Initials	Comments
10h			
10I			
10j			
11a			
11b			
11c			
11d			
11e			
12a			
12b			
12c			
12d			

Engine 1215

1215 is a 1997 Sutphen custom 2000 gpm pumper with a 750 gallon water tank and a 100 gallon AFFF foam tank. The engine is a 60 series Turbo Detroit diesel that is capable of 430 horsepower. It is just under 34' long and weighs 37,950 lbs.
cost: $350,000

1. Equipment - Compartments
   All equipment in each compartment is to be identified for the firefighter and its function clearly explained. After such instruction, the firefighter shall be able to:
   a. don and operate the Survivair SCBA units properly
   b. operate the "K" saw safely, change blades and be familiar with maintenance procedures
   c. identify the type of blade and it's appropriate use
   d. operate chain saw safely, change chains and be familiar with maintenance procedures
   e. operate 4800 Watt Homelight generator, both in the manual and electric start modes, be familiar with maintenance procedures
   f. operate the electric ventilation fan
   g. identify and operate all hydraulic equipment including:
      1. Maverick tool
      2. Model "O" cutters
      3. 30" Ram
      4. 20" Ram
      5. 12" Ram
      6. Hurst power units
      7. Brake pedal cutters
   h. identify and operate the low pressure air bags
   i. operate the Life Pak "5"
   j. operate air chisel and demonstrate the changing of tips
   k. operate the sawsall and demonstrate the changing of blades

2. Equipment - Mounted on the vehicle
   All equipment mounted on the vehicle is to be identified for the firefighter and its function clearly explained. Subsequent to such instruction, the firefighter shall be able to identify all such equipment and define the primary intended use of this equipment. The firefighter shall demonstrate the ability to remove and replace all mounted equipment.
   a. 28' extension ladder
   b. 14' roof ladder
   c. 10' attic ladder

3. Hose Loads

All hose loads carried on 1215 will be identified and explained to the firefighter. Example: Crosslays are 1 3/4" hose, each line is 200' long and equipped with an automatic nozzle that can deliver up to 200 gpm and still be handled by one or two firefighters. It is a relatively light, maneuverable line that provides both quick attack and fairly heavy fire knockdown capability.

4. Walk-Around Inspection

Confirm that all equipment is present and secured, all compartment doors are closed and the tires appear OK. Check under the truck and around the wheels for obstructions. Make sure that the firefighter is aware that this type of check is required before the truck is moved.

5. Engine/Transmission/Vital Fluids check

Check:

a. oil
b. coolant
c. power steering fluid
d. ATF (explain proper method of checking the level of ATF)
e. primer (oil less)
f. windshield washer fluid

6. Cab: Driver's controls, Lights, Sirens, Radios

a. Dashboard and Console: Identify and explain every switch, gauge and light on the dashboard and console. The compartment open warning light is only activated when the parking brake is applied or when the telelights are extended. High idle switch
b. Steering wheel: demonstrate the telescoping/tilting adjustments
c. Radios: Explain the controls for the radios, both front and rear control. Also explain the operation of the portables
d. Other cab contents: Run, preplan, map, MABAS books, Survivair unit, IS meter
e. Explain the operation of the jake brake
f. Review the operation of the gear selector
g. Air conditioning/heater controls should be reviewed for both front and rear units
h. The operation of the power mirrors and the switch for the heater control. Emphasis should be placed on adjusting these mirrors during morning truck check

7. Pump Operations

a. review demonstrate the proper engine starting technique. Stress the importance of starting the engine and letting it idle until the oil pressure stabilizes before placing the transmission into gear.

b. shifting from road to pump
    1. stop truck with service brakes, place transmission in "N"
    2. move pump shift to center position, pause briefly, move lever to pump position
    3. place transmission in "D"
    4. set the parking brake
    5. explain the pump panel to the firefighter, circulate water from the tank through the pump and back to the tank.
    6. Explain the throttle control for this engine emphasizing the rpm and pressure modes. Review and explain the pressure governor
    7. Explain (basic) friction loss and street hydraulics. Identify this department's standard operating pressures: 130 psi for the pre-connected 1 3/4" lines (preset button) and 150 psi for sprinkler/standpipe connections. Explain "gating back" when pumping unequal size and/or unequal length lines
    8. explain foam operations
    9. review manual pump override operations
c. Shifting from pump to road
    1. make sure that the pump panel throttle is on idle
    2. move truck transmission to "N"
    3. move pump lever to center position, pause briefly, then move lever to road position

8. Driver Training

a. the shift officer or designee shall take the firefighter out for a driver training evolution. Common sense shall prevail; do not take out a firefighter if the weather conditions are not favorable. Do not take out a firefighter who is not yet ready to try handling this rig in traffic
b. the firefighter shall properly perform a walk-around inspection of the vehicle prior to starting or moving it
c. the firefighter shall properly start the vehicle, monitor the engine, air and transmission gauges, and confirm the proper placement of the mirrors
d. the recruit shall properly release the parking brake and move the vehicle out of the bay

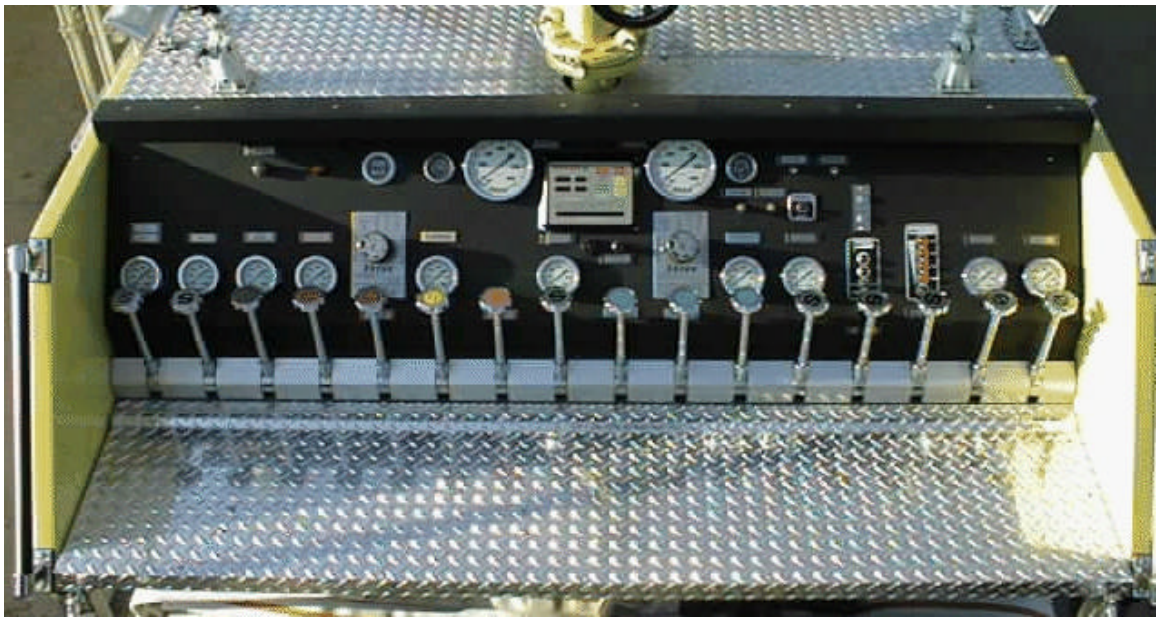
NOTE: Prior to the firefighters first trip on the roadway carefully explain the extreme turning angle this vehicle is capable of (40^{o}). Make sure the firefighter is aware of the need to make careful turns until they become comfortable with the handling characteristics of 1215. Adequate clearance around curbs, poles, signs, rocks and other obstructions must be maintained when making right hand turns. Advise the firefighter of the width of this truck (96" or 8'). This is the maximum legal width for a vehicle intended to be driven on public highways.

e. the driver's training evolution should encompass the following
    1. while driving, maintain assured clear distance; at stops always leave enough space between 1215 and the vehicle in front to allow 1215 to easily move out of traffic if dispatched on a call
    2. always use turn signals, even when changing lanes

3. backing practice: Use a parking lot to provide a safe practice area for the firefighter to practice backing. Six traffic cones set in a 10' x 30' lane are useful in teaching the firefighter to use both sets of mirrors
4. utilize the drivers rodeo drill stations
5. instruct the firefighter in the proper method of "dressing" a hydrant; have the firefighter demonstrate the same. Make sure to stress the proper wrapping of the hydrant for the safety of the firefighter.
6. emphasize the bus style mirrors on this vehicle compared to the other apparatus on the department

Upon completion of the above, the firefighter shall be able to identify, retrieve, and operate the equipment carried on and in 1215. The firefighter shall be able to operate the vehicle in both the pump and road modes. The firefighter will not be considered an "expert" pump operator as this takes time and experience.

1215 Pump Panel



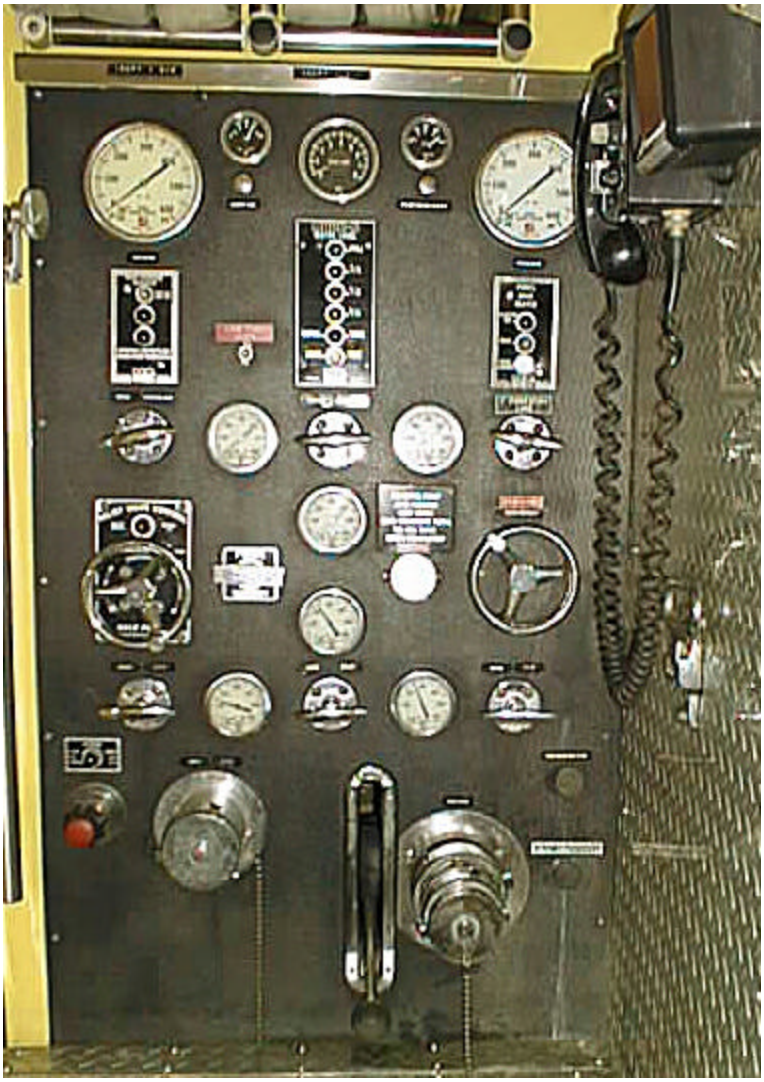
1215 BTO
Check Sheet

	Date	Initials	Comments
1a			
1b			
1c			
1d			
1e			
1f			
1g			
1h			
1I			
1j			
1k			
2a			
2b			
2c			
3i			preconnects
3ii			hosebeds
3iii			other hose
4			
5			
5a			
5b			
5c			
5d			
5e			
5f			
6a			
6b			
6c			
6d			
6e			
6f			
6g			
6h			
7a			
7b			
7c			
8a			
8b			
8c			
8d			
8e			

Engine 1217

1217 is a 1984 Sutphen Mini Pumper with a 366 CI Chevrolet gasoline engine. It has a 250-gpm pump and a 300-gallon water tank. Its primary purpose is technical rescue and wildland firefighting. It weighs 15,750 lbs.and costs: $60,000

1217 Pump Panel



1242 is 1993 Type 1 GMC 3500 6.5 liter Detroit turbo diesel with a Bruan ambulance body. This ambulance is paramedic equipped and can transport up to two victims at once.

1. Show the firefighter how to release the stretcher. Demonstrate with the help of another firefighter, the correct way to load and unload the stretcher (lifting with legs not with back). Demonstrate all positioning controls on the stretcher

2. Identify each of the kits carried on the squad cardio, mass casualty, pediatric, drug box, nitrous oxide, portable aspirator, oxygen therapy and EKG. Explain how the kits are secured on each squad. The locks on the drug box and the nitrous oxide should be explained and the firefighter shown how to record their numbers.

3. Familiarize the firefighter with the general layout of the squad. Demonstrate the lighting and ventilation controls. Show the location and operation of the on-board oxygen and suction systems, include instructions on how to clean the suction units after use.

4. Locate and identify the spare report forms, protocol book and information cards.

5. Cab
    a. Go over all of the operating controls of the vehicle. This includes all normal vehicle controls as well as the emergency warning lights, siren, scene lights, interior lights and the like. NOTE that the factory-installed gauge for the charging/discharging is inoperative on this unit; use the ammeter installed on the switch panel. 1242 is equipped with an automatic idle control that should raise the idle speed sufficiently to meet the electrical demand when the squad is parked. It may sometimes be necessary to tap the accelerator lightly after placing the transmission in "park" to get it to idle up. The driver should always check the ammeter before leaving the squad. The system cancels automatically when the transmission is placed in any drive position. Auxiliary emergency lighting should be used while on scene if conditions permit.
    b. Show the firefighter where the map book and other run books are kept, and how to use them.
    c. Go over the location of field glasses, cameras, photo card and Knox Box key and how they operate.
    d. RADIOS: Explain all controls and frequencies (both fire and hospital). Go over the fire radio and portable with special attention to pausing for a second after the mic is keyed before you begin talking. This is to allow the system to come on the air. On the mobile radio, the red light next to the volume control

will light when it is OK to talk. Explain the hospital radio and it's portable including the Hillcrest frequencies.

e. Explain the use of the cellular phone including the pre-programmed numbers and how to convert it to a portable phone for field use.

6. Exterior and interior compartments: Remove and identify all exterior and interior compartment contents for the firefighter.

7. Engine compartment: Demonstrate the procedure for checking the engine oil, coolant, brake fluid, windshield washer solvent, power steering fluid, batteries and belts. Explain the correct procedure for checking the transmission fluid level. (engine and transmission warm, vehicle level and idling)

8. Check all of the vehicle's lights, inside, outside, warning and normal operating lights. Inspect the tires, check any that look low with the tire pressure gauge and adjust as needed. Inspect the outside of the vehicle, making sure all the outside compartments are secured, mirrors are aligned and the doors are secure.

9. The firefighter should have a clear understanding of the operation of 1242 and its contents, the truck check book for 1242 should be used at this time to thoroughly familiarize the recruit with all the equipment carried on board. This will not only provide an opportunity for some in-depth experiences with the equipment it will help familiarize the new member with our truck check procedures. Stress to the recruit the importance of accurate and thorough truck checks.

10. The shift officer or their designee shall take the firefighter out for a driver's training evolution. The firefighter should disconnects the shore line and close the cover on the box. The firefighter must check the mirrors and engine gauges, fasten seat belts then exit the bay. Make sure the firefighter understands the operations of the overhead door controls.
    While driving the firefighter will:
    a. Maintain assured clear distance.
    b. Always use turn signals; this includes when changing lanes as well as when turning corners.
    c. Stay far enough behind other vehicles at stops so that 1242 can respond if dispatched.
    d. Take the firefighter to a parking lot and practice backing. Several traffic cones may be helpful; start with a 10' wide lane to back into. Make sure the firefighter learns to back up using both mirrors.
    e. Utilize the driver's rodeo drill stations
    f. Ensure the firefighter knows how to properly wrap a hydrant.
    g. Use of the parking brake: Stop the vehicle using the service brake. While holding the vehicle with the service brakes, firmly set the parking brake. Carefully release the service brakes to confirm that the vehicle will not move, then place the transmission in "park". To release the parking brakes,

first take the transmission out of "park", then release the parking brake. NO OTHER METHOD IS ACCEPTABLE.

11. Upon completion of this section the firefighter should:
    a. Have a working knowledge of the contents of 1242.
    b. Be able to be a useful "GO-FOR".
    c. Be able to drive 1242 in a safe manner.

1242 BTO
Check Sheet

	Date	Initials	Comments
1			
2			
3			
4			
5a			
5b			
5c			
5d			
5e			
6			
7			
8			
9			
10a			
10b			
10c			
10d			
10e			
10f			
10g			
11a			
11b			
11c			

Squad 1252

1252 is 1994 Type 1 Chevrolet 3500 6.5 liter Detroit turbo diesel with a EVCO ambulance body. This ambulance is paramedic equipped and can transport up to two victims at once.

1. Show the firefighter how to release the stretcher. Demonstrate with the help of another firefighter, the correct way to load and unload the stretcher (lifting with legs not with back). Demonstrate all positioning controls on the stretcher

2. Identify each of the kits carried on the squad cardio, mass casualty, pediatric, drug box, nitrous oxide, portable aspirator, oxygen therapy and EKG. Explain how the kits are secured on each squad. The locks on the drug box and the nitrous oxide should be explained and the firefighter shown how to record their numbers.

3. Familiarize the firefighter with the general layout of the squad. Demonstrate the lighting and ventilation controls. Show the location and operation of the on-board oxygen and suction systems, include instructions on how to clean the suction units after use.

4. Locate and identify the spare report forms, protocol book and information cards.

5. Cab
    a. Go over all of the operating controls of the vehicle. This includes all normal vehicle controls as well as the emergency warning lights, siren, scene lights, interior lights and the like. NOTE that the factory-installed gauge for the charging/discharging is inoperative on this unit; use the ammeter installed on the switch panel. 1252 is equipped with an automatic idle control that should raise the idle speed sufficiently to meet the electrical demand when the squad is parked. It may sometimes be necessary to tap the accelerator lightly after placing the transmission in "park" to get it to idle up. The driver should always check the ammeter before leaving the squad. The system cancels automatically when the transmission is placed in any drive position. Auxiliary emergency lighting should be used while on scene if conditions permit.
    b. Show the firefighter where the map book and other run books are kept, and how to use them.
    c. Go over the location of field glasses, cameras, photo card and Knox Box key and how they operate.
    d. RADIOS: Explain all controls and frequencies (both fire and hospital). Go over the fire radio and portable with special attention to pausing for a second after the mic is keyed before you begin talking. This is to allow the system to come on the air. On the mobile radio, the red light next to the volume control will light when it is OK to talk. Explain the hospital radio and it's portable including the Hillcrest frequencies.
    e. Explain the use of the cellular phone including the pre-programmed numbers and how to convert it to a portable phone for field use.

6. Exterior and interior compartments: Remove and identify all exterior and interior compartment contents for the firefighter.

7. Engine compartment: Demonstrate the procedure for checking the engine oil, coolant, brake fluid, windshield washer solvent, power steering fluid, batteries

and belts. Explain the correct procedure for checking the transmission fluid level. (engine and transmission warm, vehicle level and idling)

8. Check all of the vehicle's lights, inside, outside, warning and normal operating lights. Inspect the tires, check any that look low with the tire pressure gauge and adjust as needed. Inspect the outside of the vehicle, making sure all the outside compartments are secured, mirrors are aligned and the doors are secure.

9. The firefighter should have a clear understanding of the operation of 1252 and its contents, the truck check book for 1252 should be used at this time to thoroughly familiarize the recruit with all the equipment carried on board. This will not only provide an opportunity for some in-depth experiences with the equipment it will help familiarize the new member with our truck check procedures. Stress to the recruit the importance of accurate and thorough truck checks.

10. The shift officer or their designee shall take the firefighter out for a driver's training evolution. The firefighter should disconnects the shore line and close the cover on the box. The firefighter must check the mirrors and engine gauges, fasten seat belts then exit the bay. Make sure the firefighter understands the operations of the overhead door controls.
    While driving the firefighter will:
    a. Maintain assured clear distance.
    b. Always use turn signals; this includes when changing lanes as well as when turning corners.
    c. Stay far enough behind other vehicles at stops so that 1252 can respond if dispatched.
    d. Take the firefighter to a parking lot and practice backing. Several traffic cones may be helpful; start with a 10' wide lane to back into. Make sure the firefighter learns to back up using both mirrors.
    e. Utilize the driver's rodeo drill stations
    f. Ensure the firefighter knows how to properly wrap a hydrant.
    g. Use of the parking brake: Stop the vehicle using the service brake. While holding the vehicle with the service brakes, firmly set the parking brake. Carefully release the service brakes to confirm that the vehicle will not move, then place the transmission in "park". To release the parking brakes, first take the transmission out of "park", then release the parking brake. NO OTHER METHOD IS ACCEPTABLE.

11. Upon completion of this section the firefighter should:
    a. Have a working knowledge of the contents of 1252.
    b. Be able to be a useful "GO-FOR".
    c. Be able to drive 1252 in a safe manner.

1252 BTO
Check Sheet

	Date	Initials	Comments
1			
2			
3			
4			
5a			
5b			
5c			
5d			
5e			
6			
7			
8			
9			
10a			
10b			
10c			
10d			
10e			
10f			
10g			
11a			
11b			
11c			

The Willoughby Hills Fire Department will, at the patients' request, transport to various medical facilities. The senior paramedic on scene, administering care, will make the decision as to whether or not this request will be granted. The firefighter should know the safest route to the following medical facilities:

1. Cleveland Clinic (Cleveland)
   I-90 West to Martin Luther King Blvd. South on MLK to East 105th St., turn right onto Carnegie Ave., turn right onto East 90th St., turn right to the Emergency entrance on right.

2. Lake East Hospital
   I-90 East to 44 North. Take 44 North to 84 East. 84 East to Liberty St. North, take Liberty St. to Washington East. Hospital is on Washington on the right.

3. Lake West Hospital
   Route 91 (SOM Center) North to Euclid Ave. East on Euclid Ave. Hospital is on right.

4. Meridia Hillcrest
   Route 91 (SOM Center) South to Mayfield Rd. East to Emergency entrance on right.

5. Meridia Huron
   Chardon Rd. to Euclid Ave., turn left on Euclid. Take Euclid to Belmore Ave. in East Cleveland and turn left. Follow Emergency signs.

6. Meridia Southpoint
   I-271 South to Chagrin Blvd. Right on Chagrin to Richmond. Take a left on Richmond. Take Richmond to Harvard and turn right on Harvard. Take Harvard to Warrensville. Turn left on Warrensville, the hospital will be on the right. Look for Emergency signs.

7. Metro General Hospital
   I-90 West to West 25th St., turn left and follow signs.

8. Mt. Sinai Hospital (Cleveland)
   I-90 West to Martin Luther King Blvd. Take MLK South, turn right on Hough and follow signs.

9. Mt. Sinai East
   Chardon Rd. West past Bishop Rd. Hospital is on left.

10. Saint Lukes Hospital
    I-271 South to Cedar Rd. West to Richmond Rd. South. Richmond Rd. South to Shaker Blvd., turn right. (West to 11311 Shaker) follow signs.

11. University/Rainbow Babies & Children's/MacDonalds Women's Hospital
    I-90 West to Martin Luther King Blvd. MLK South to East 105th St. South on E.105th to Euclid Ave. East on Euclid. Hospital is on the right, look for Emergency signs.

Chiefs Car 1231 (1200)

1991 Chevrolet Caprice Classic
Primary purpose: staff vehicle

Captains Car 1211 (1201)

1994 Ford Crown Victoria
Primary purpose: staff vehicle

Car 1221

1990 Ford Crown Victoria
primary purpose: Chase vehicle

Utility 1227

1995 Chevrolet 2500 4 x 4 pick-up
primary purpose: utility & chase vehicle
with snow plow

Utility 1237

1986 Ford E350 (Wheeled Coach)
primary purpose: Salvage & FIU

HM1

1985 GMC Brigadier with a
Marion Heavy Rescue Body

APPENDIX C

CRITIERION BASED TESTING

Willoughby Hills Fire Department

Basic Training Outline Test

INSTRUCTIONS: On a separate piece of paper, answer the following questions. Answers should be complete as possible. When completed, inform your evaluator that you are ready to proceed to the skills assessment testing.

HISTORY AND ADMINISTRATION

1.1 Identify the 4 major points of the mission statement of the Willoughby Hills Fire Department.
1.2 Identify the various ranks, in proper order, of the chain of command for the department.
1.3 Who was the first fire chief of the Willoughby Hills Fire Department?
1.4 When was the Willoughby Hills Fire Department formed?
1.5 List requirements of participation as they relate to Policy 200.
1.6 Describe the proper order of the daily routine on the department.
1.7 Explain the requirements and differences between general alarms and platoon call backs.
1.8 Properly complete the following forms: (blank forms found at end of test)
   a. Time sheet for station-duty and off-duty responses
   b. Time-off /Shift trade request
   c. Repair order
   d. School reimbursement
   e. Drill excuse

GEOGRAPHY

1.9 Properly identify all streets on a blank map.
2.0 Properly identify all standpipe locations given a blank map of a complex with standpipes.

OPERATIONS

2.1 Properly explain the function of the basic EMT on ambulance calls.
2.2 Properly explain the function of the senior Paramedic on ambulance calls.
2.3 Identify the proper tools needed to dress a hydrant.
2.4 Properly identify the responsibilities of the following positions for medical calls:
   A. Driver
   B. Passenger
   C. Chase car

2.5 Identify the length of each individual hose load on each engine.
   a. 1213
   b. 1214
   c. 1215

You may now proceed to the practical skills assessment portion of the test.

EQUIPMENT OPERATIONS

1213-1a.	Properly don an S.C.B.A. while wearing full turn out gear in 50 seconds or less.
1213-1b	Demonstrate the operation of the Stihl saw: (1) Change blades (2) Identify and demonstrate maintenance procedures
1213-1c	Identify the type of blade and it's appropriate use.
1213-1d	Demonstrate the operation of the chain saw: (1) Change chain (2) Identify and demonstrate maintenance procedures
1213-1e	Operate Winco 5KW generator: (1) Manual start mode (2) Electric start mode (3) Identify and demonstrate maintenance procedures
1213-1f	Operate Tele-Lights and electrical breaker box.
1213-1g	Operate the gasoline powered blower
1213-1h	As a member of a 2 person team, demonstrate the proper deployment of the fold-a- tank. (1) Use of ground sheet (2) Proper draining procedure (3) Proper re-packing procedure
1213-2	The candidate shall demonstrate the ability to remove, deploy, and replace the following equipment:
1213-2a	24' extension ladder
1213-2b	14' roof ladder
1213-2c	10' folding ladder
1213-2d	Apollo monitor with base
1213-2e	pike pole, pry bar, axes, extinguishers
1213-2f	hard suction hose
1213-3	Identify all hose loads carried on engine
1213-4	Successfully complete a walk around inspection and explain the use of same.

1213-5	Demonstrate the ability to check the following fluids:
1213-5a	Oil
1213-5b	Coolant
1213-5c	Power steering fluid
1213-5d	Automatic transmission fluid
1213-5e	Primer oil
1213-5f	Windshield washer fluid
1213-6 a	Identify dash gauges and warning lights
1213-6b	Demonstrate the operation of the tilt control and telescoping control on steering wheel.
1213-6c	Explain the operation of 800 Mhz radio and 420 Mhz radio
1213-6d	Identify run books, map books, preplan books
1213-7a	Demonstrate the proper engine starting technique.
1213-7b	Demonstrate the proper method to shift from road to pump.
1213-7c	Demonstrate the proper method to draft water from a static water source.
1213-8	Successfully attain an 85% grade using E-1213 on the driving rodeo.
1213-9	Using the picture on p.49, identify the following: a. Gated suction inlet b. Vacuum gauge c. Water tank level indicator d. Tank to pump valve control e. Tank fill valve control f. Relief valve

Willoughby Hills Fire Department

Basic Training Outline Test

INSTRUCTIONS: On a separate piece of paper, answer the following questions. Answers should be complete as possible. When completed, inform your evaluator that you are ready to proceed to the skills assessment testing.

2.6 When is it acceptable to remove your airpack while working at a structure fire?
2.7 Describe the method used by the department when laying supply lines at structure fires.
2.8 Describe what M.A.B.A.S. is.
2.9 Define the typical running order for structure alarms. (Vehicles and staffing of vehicles).
2.10 Describe the duties of the engine operator at structure fires.
2.11 Describe the Knox-Box system and how is it beneficial to the community.
2.12 Define, in order, the department's priorities at a structure fire.
2.13 Define size-up and explain its importance.
2.14 Define the term overhaul.
2.15 What is the common saying regarding forcible entry?

You may now proceed to the practical skills portion of the test.

1214-1a. Properly don an S.C.B.A. while wearing full turn out gear in 50 seconds or less.
1214-1b Demonstrate the operation of the Stihl saw:
(3) Change blades
(4) Identify and demonstrate maintenance procedures
1214-1c Identify the type of blade and it's appropriate use.
1214-1d Demonstrate the operation of the chain saw:
(3) Change chain
(4) Identify and demonstrate maintenance procedures
1214-1e Operate Winco 5KW generator:
(4) Manual start mode
(5) Electric start mode
(6) Identify and demonstrate maintenance procedures
1214-1f Operate Tele-Lights and electrical breaker box.
1214-1g Operate the gasoline powered blower.
1214-2 The candidate shall demonstrate the ability to remove, deploy, andreplace the following equipment:
1214-2a 24' extension ladder
1214-2b 14' roof ladder
1214-2c 10' folding ladder
1214-2d Apollo monitor with base
1214-2e pike pole, pry bar, axes, extinguishers

1214-3	Identify all hose loads carried on engine.
1214-4	Define the operation of the on-board foam system. Demonstrate proper operation and flushing procedures.
1214-5	Successfully complete a walk around inspection and explain the use of same.
1214-6	Demonstrate the ability to check the following fluids:
1214-6a	Oil
1214-6b	Coolant
1214-6c	Power steering fluid
1214-6d	Automatic transmission fluid
1214-6e	Primer oil
1214-6f	Windshield washer fluid
1214-7 a	Identify dash gauges and warning lights
1214-7b	Demonstrate the operation of the tilt control and telescoping control on steering wheel.
1214-7c	Explain the operation of 800 Mhz radio and 420 Mhz radio
1214-7d	Identify run books, map books, preplan books
1214-8a	Demonstrate the proper engine starting technique.
1214-8b	Demonstrate the proper method to shift from road to pump.
1214-8c	Explain basic hydraulics and standard pump pressures for hand lines and standpipes.
1214-9	Successfully attain an 85% grade using E-1213 on the driving rodeo.
1214-10	Successfully demonstrate the proper procedure to wrap a hydrant.
1214-11	Demonstrate the proper method to flush a hydrant.
1214-12	Demonstrate proper radio traffice with the engine operator regarding opening the hydrant.
1214-13	Demonstrate the proper method to connect to a standpipe.

Willoughby Hills Fire Department

Basic Training Outline Test

INSTRUCTIONS: On a separate piece of paper, answer the following questions. Answers should be complete as possible. When completed, inform your evaluator that you are ready to proceed to the skills assessment testing.

2.16 Describe the running order for motor vehicle accidents.
2.17 Describe the proper extinguisher to use to neutralize a vehicle's gas tank.
2.18 Define salvage.
2.19 Explain the proper percentage setting on E-1215 for foam operations.
2.20 Explain the proper pump pressure to ensure smooth portable foam operations.
2.21 Describe the hazards to the body of the fluid used in the hydraulic rescue tools.
2.22 Describe the advantages of using the hydraulic rescue tool manifold.
2.23 Describe the EMS equipment located on E-1215 and its location.
2.24 Define the proper procedures taken prior to treating patients at an MVA.
2.25 Describe the function of the jake brake on E-1215.

You may now proceed to the practical skills portion of the test.

1215-1a. Properly don an S.C.B.A. while wearing full turn out gear in 50 seconds or less.
1215-1b Demonstrate the operation of the Stihl saw:
(5) Change blades
(6) Identify and demonstrate maintenance procedures
1215-1c Identify the type of blade and it's appropriate use.
1215-1d Demonstrate the operation of the chain saw:
(5) Change chain
(6) Identify and demonstrate maintenance procedures
1215-1e Operate the Homelite generator:
(7) Manual start mode
(8) Electric start mode
(9) Identify and demonstrate maintenance procedures
1215-1f Operate electric ventilation fan.
1214-1g Identify and operate the following hydraulic tools:
(1) Maverick tools
(2) Model "O" Cutters
(3) 30" ram
(4) 20" ram
(5) 12" ram
(6) Hurst power unit

(7) Brake pedal cutters.

1215-h	Demonstrate the proper operation of the low pressure air bags.
1215-i	Demonstrate the proper operation of the Lifepak 5 heart monitor.
1215-j	Demonstrate the proper operation of the air chisel tool and change the tips
1215-k	Demonstrate the proper operation of the sawsall and change the blade.
1215-2	The candidate shall demonstrate the ability to remove, deploy, and replace the following equipment:
1215-2a	24' extension ladder
1215-2b	14' roof ladder
1215-2c	10' folding ladder
1215-3	Identify all hose loads carried on engine.
1215-4	Define the operation of the on-board foam system. Demonstrate proper operation and flushing procedures.
1215-5	Successfully complete a walk around inspection and explain the use of same.
1215-6	Demonstrate the ability to check the following fluids:
1215-6a	Oil
1215-6b	Coolant
1215-6c	Power steering fluid
1215-6d	Automatic transmission fluid
1215-6e	Primer oil
1215-6f	Windshield washer fluid
1215-7 a	Identify dash gauges and warning lights
1215-7b	Demonstrate the operation of the tilt control and telescoping control on steering wheel.
1215-7c	Explain the operation of 800 Mhz radio and 420 Mhz radio
1215-7d	Identify run books, map books, preplan books
1215-8a	Demonstrate the proper engine starting technique.
1215-8b	Demonstrate the proper method to shift from road to pump.
1215-8c	Explain basic hydraulics and standard pump pressures for hand lines and standpipes.
1215-9	Successfully attain an 85% grade using E-1213 on the driving rodeo.
1215-10	Successfully demonstrate the proper procedure to wrap a hydrant.
1215-11	Demonstrate the proper method to flush a hydrant.
1215-12	Demonstrate proper radio traffic with the engine operator regarding opening the hydrant.

Willoughby Hills Fire Department

Basic Training Outline Test

1217-1	Demonstrate the proper method of tying the following knots: (a) Figure 8 (b) Bowline (c) Clove hitch (d) Munter hitch (e) Double figure 8 (f) Water knot
1217-2	Explain the proper care of kern mantle rope.
1217-3	Explain the proper determination of an anchor point.
1217-4	Demonstrate the proper configuration of a 3:1 hauling system
1217-5	Demonstrate the proper operation of a rappelling rack.
1242-1	As part of a 2-person team, properly operate a cot and load a patient into an ambulance.
1242-2	Properly identify and demonstrate, where applicable, the uses of the following equipment: (a) Blood pressure cuff (b) Jump kit (c) Pediatric kit (d) EKG / Defibrillator (e) Drug box (f) Nitrous Oxide kit (f) Oxygen kit (g) Intubation equipment
1242-3	Properly demonstrate the following on-board equipment: (a) Interior lighting controls (b) Compartment ventilation controls (c) Oxygen system (d) Suction system
1242-4	Locate spare report forms, protocol book, and information cards.
1242-5	Properly identify and explain the use of equipment and gauges in the cab: (a) Normal vehicle controls (b) Emergency warning lights (Day and night mode) (c) Siren (d) Scene lights (e) Interior lights (f) Radio (g) Automatic idle control

(h) Ammeter
(i) Map book
(j) Camera
(k) Knox box key

1242-6 Properly identify the location and various uses of equipment located in outside compartments:
(a) Backboard with head blocks
(b) Stair chair
(c) KED
(d) Spill response kit
(e) Personal flotation devices
(f) Rope throw bag
(g) Adult hare traction splint
(h) Pediatric hare traction splint
(i) Vacuum splints
(j) Mass casualty/survival scan kit

1242-7 Demonstrate the ability to check the following fluids:

1242-7a Oil

1242-7b Coolant

1242-7c Power steering fluid

1242-7d Automatic transmission fluid

1242-7e Windshield washer fluid

1242-8 Properly demonstrate, as part of a 2 person team, the method to change the on-board oxygen cylinder.

1242-9 Properly demonstrate the use of the 800Mhz radio as well as the 420Mhz radio.

1242-10 Successfully attain an 85% grade using E-1213 on the driving rodeo.